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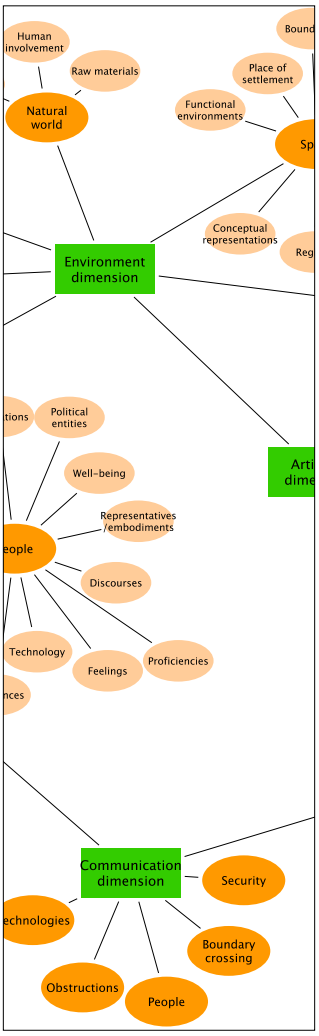
International Professional Communication

yesterday ‹ today › tomorrow



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International Professional Communication: yesterday ‹ today › tomorrow

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FROM THE EDITOR

International professional communication: An overview

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Keywords. International professional communication (IPC), Connexions, Discipline, Complexity, Overview, Map.

connexions • international professional communication journal addresses the effective and efficient communication of information related to the workplace and civic activity in and between any place in the world.

This communication is important because the world is increasingly interconnected, and communication, consequently, involves humans, institutions, and objects from, and related to different parts of the world. A recent event shows well how connected and interdependent people are upon each other, and with everything else on earth, and even beyond it. It also shows well how critical international professional communication is for us today. That event is the 2011 earthquake, tsunami, and nuclear power plant disaster in Japan, which I will briefly revisit in the next section of this editorial.

Envisioning the world today

On Friday, March 11, 2011, a 9.0 magnitude undersea earthquake occurred in the Pacific Ocean. It was recorded by deep ocean buoys and sensors, which sent the information, via satellite, to computers at the Japan Meteorological Agency. The computers analyzed the intensity of the quake, sent radio, television and cellphone alerts to the population in Japan, stopped trains, elevators and manufacturing facilities, and halted some of the country's energy and gas services, thus preventing the loss of countless human lives.[1]

The movement of water that accompanied the quake transformed into a tsunami that broke along the northeastern coast of Japan. On land, the waves deactivated the emergency cooling system of the Fukushima Daiichi Nuclear Power Plant reactors, causing radioactive material to contaminate the atmosphere, soil, and ocean. The winds, however, blew most of the radioactive material toward the ocean, preventing numberless people from dieing.

These events destroyed human and animal life, property, belongings, and farmland, dismantled whole communities and lifestyles, and brought pain, suffering, and immediate and long-lasting health problems to the survivors. The disaster also brought a wave of support—in the form of food, water, shelter, medication, equipment, and emotional and psychological aid—for the survivors and workers from people throughout the world as they learned about the incidents via the news and social media networks.

The earthquake-tsunami-nuclear power plant incidents brought the country's water, power, telephone, and transport systems, as well

as its businesses, industry, commerce, tourism, and sports to a halt. Decreased capacity to produce energy in the following months disrupted the production of goods in Japan and their export to other countries, disturbing the production, consumption and economies of countries across the globe.

Scientists, engineers and technicians from different countries tried to find solutions to the problems, having also identified significant gaps in seismological, nuclear, health, and crisis management knowledge and expertise.

The incidents impacted public and private discourses and concerns, bringing new factors to environmental debates across the world, including the debate on nuclear power safety, and the differences between rich, and poor and developing countries concerning energy needs and nuclear power.

They also impacted government, with the country's leader being asked to resign, and the government accused of withholding and covering up vital information, not heeding expert advice, ignoring the law, and promoting the nuclear status quo.

These events were recorded and communicated in writing, orally, visually, electronically, and nonverbally. They were registered and conveyed in different languages and writing systems. And they were transmitted in different parts of the world, for different parts of the world. They were seen, heard, read, analyzed, described and explained by and among experts from wide ranging fields, by and among semi-experts in the media, and by the general population across the world. They were also converted into numerous verbal and visual genres—articles,

blog posts, editorials, field notes, interviews, legislation, lessons, maps, photographs, podcasts, recommendations, reports, seismographs, text messages, timelines, videos—by writing, information design and other professionals, with the aid of an infinite number of tools and technologies.

Like so many other happenings around the world, these events bear witness that

- the world is an intricate network of complex natural elements, people, systems, and artifacts,
- the network is dynamic, and its elements interact, on a smaller or larger scale, in predictable and unpredictable ways, in a single place, or in various places of the world at the same time,
- the elements of the network have no relationships, value, and importance in themselves—they just exist; rather, it is we, humans, that connect and interpret them so as to understand the world and be able to act in it,
- international professional communication is essential for humans to be safe, interact with their environments, engage with their fellow human beings, make decisions, and take action.

These four broad elements point to the importance of having a dedicated forum for "researchers, practitioners, students and emerging scholars from diversified backgrounds, interests, and nationalities" (*connexions*)

to freely discuss issues related to communication in today's world. *connexions • international professional communication journal* is that forum. In fact, we need many such forums.

Addressing the world today

A significant number of peer-reviewed journals have been addressing international professional communication topics in theme-based issues, regular articles, and with their own specific foci.

Over the past five years, there have been special issues on language, legal issues, learning, networking, localization, culture and health, and professional communication in international and global contexts. There have also been IPC-related articles on such topics as discourse (e.g., Mitra, 2013), environment, risk, and science communication (e.g., Thakadu, & Tau, 2012; Ding, 2009; ter Huurne, Griffin, & Gutteling, 2009), games (e.g., Sherlock, 2009), and visual communication (e.g., de Cossío, 2009). And the journals themselves focus on areas that are integral to IPC like specialized translation (JOSTRANS), and the specialized languages of professional communication and their translation (Terminology).

The extraordinary diversity of topics covered by existing publications suggests, however, that any topic in professional communication can be approached from the point of view of IPC.

Yet, in 1999, Lovitt wrote that "Understanding professional communication in a global economy represents a formidable challenge, insofar as it implies nothing less than a wholesale reconceptualization of our discipline" (p. 1). He added that "Relying on research from

allied disciplines ["such as intercultural communication and international business" (p. 2)] . . . may have undesirable consequences," and he highlighted "topics as translation, localization, document design, visual communication, contrastive rhetorics, comparative genre analyses, patterns of reading and processing information, and so on" as being "critically important" for IPC (pp. 6–7).

Fourteen years later, in a far more complex and interconnected world, I find myself asking what are the "critically important" topics for IPC? Are we still studying IPC from the perspective of "allied disciplines"? And how far are we into the task of creating a distinctive identity for IPC?

The above list of journals suggests that the identity of IPC is still in its initial stages, that there are considerable overlaps with intercultural, technical, business and other areas of professional communication, that IPC continues to depend on research from kindred fields, and that the critical topics for IPC are, perhaps, too broad.

connexions intends to refine and consolidate the field.

To achieve this, we needed to (1) analyze how professionals, academics, and students envision IPC, and (2) present findings in such a way that people from different professional, academic, and cultural backgrounds; speaking different languages with varying degrees of fluency; with different interests, preferences, abilities, ages; with different skills in handling technology; and who would be accessing the manuscript from different devices, and different parts of the world could easily understand the findings.

That was the rationale behind the call for papers for the first issue, and it is foundational for the next two sections of this editorial: one in which I chart IPC in a network map; the other, in which I point out the major connections between the topics. The map itself can be seen online at http://connexionsj.files.wordpress.com/2013/05/ipc-map_1-1.pdf; the following section explains its production.

Charting international professional communication

In this section, I explain the research methodology, present the current map of IPC, and describe its contents.

Methodology

To create the map, I loosely followed the process and rhetorical approach of Selfe and Selfe (2012) as they created the map of technical communication (I followed Selfe and Selfe *loosely* because we are creating different target visuals; whereas they created text clouds, I am creating a network graph).

Focusing question(s) and rhetorical context of the map. The map answers the following questions: (1) What major topics compose IPC, based on the contents of the papers published in this issue? (2) In what conceptual contexts do these topics occur?

The purpose of the map is to portray the major topics that emerge from the papers published in this inaugural issue, to do it in such a way that the map presents a comprehensive—though necessarily bounded—view of IPC, and to facilitate comprehension of the topics and the connections between them. The audience for the map is the intended

readership of *connexions*, i.e., "researchers, practitioners, students and emerging scholars from diversified backgrounds, interests, and nationalities" (*connexions*) that are related to and/or interested in IPC.

Data set, rules for structuring the terms and generating the map, and granularity of the map. The papers published in this issue provide the data set for the map. The papers include a preamble, 18 position papers, and 3 literature reviews. They were written by academics (16), students (2), practicing professionals (1), practicing professionals/academics (1), and practicing professionals/students (1). The authors are from Argentina (1), Canada (1), Germany (1), Ireland (1), Japan (1), Spain (1), United Kingdom (1), and United States (14). The occupations and countries the authors come from represent some of the diversity the journal is aiming for.

To determine the major topics that would make up the map, I

(1) created an alphabetical list of the terms the authors had considered most relevant, i.e., the keywords, and noun phrases and verbs in the titles of the articles,

(2) organized these terms under the four broad elements mentioned on page 4—i.e, that the world is a complex and dynamic network of elements with no intrinsic relationships, value, and importance, and that IPC is essential for human safety, interaction, engagement, decision-making, and action-taking—while bearing in mind the context in which the authors used the terms; this meant that some terms fit into multiple categories,

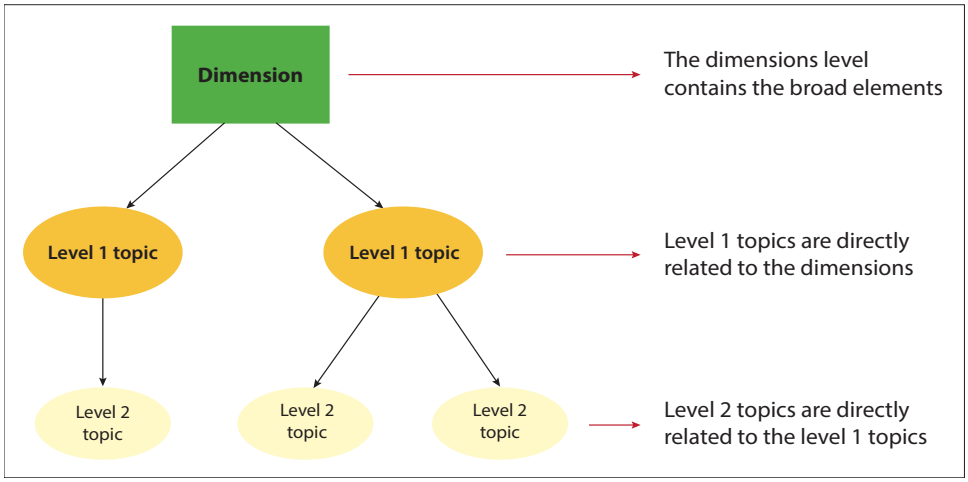
(3) modified the four elements in view of the collection of terms, replacing, adding and subtracting where necessary—instead of "natural elements, people, systems, and artifacts," I organized the terms under the following five *dimensions*: environment, human, communication, technology, and artifacts,

(4) read the papers for terms and phrases that were not in the titles and keywords, yet contributed to the desired comprehensive view of IPC, and associated them with the five dimensions, again keeping in mind the contexts in which they appeared in the papers,

(5) reorganized the terms into two levels of more focused topics, level 1 directly related to the dimensions, and level 2 directly related to the level 1 topics (Figure 1),

Figure 1.

Illustration of IPC map levels organization



(6) created a network graph in yEd Graph Editor, and color coded it as in Figure 1: the green rectangular nodes represent the dimensions, the orange nodes the level 1 terms, and the yellow nodes the level 2 topics. Next, I selected the program's organic layout to arrange the information, which is adequate for "undirected graphs" and representing "complex networks" (yWorks),

(7) exported the graph as a JPG file, and recreated each dimension in Adobe Illustrator for easier integration in this article.

Presenting and describing the map. The full map, and each of its dimensions are presented in the next section. Because the topic names classify content (terms and parts of sentences) from different papers, the connection between the topics and the content may not be immediately apparent. To make the connections clear, I follow each topic with direct references to the papers and authors published in this volume of *connexions*.

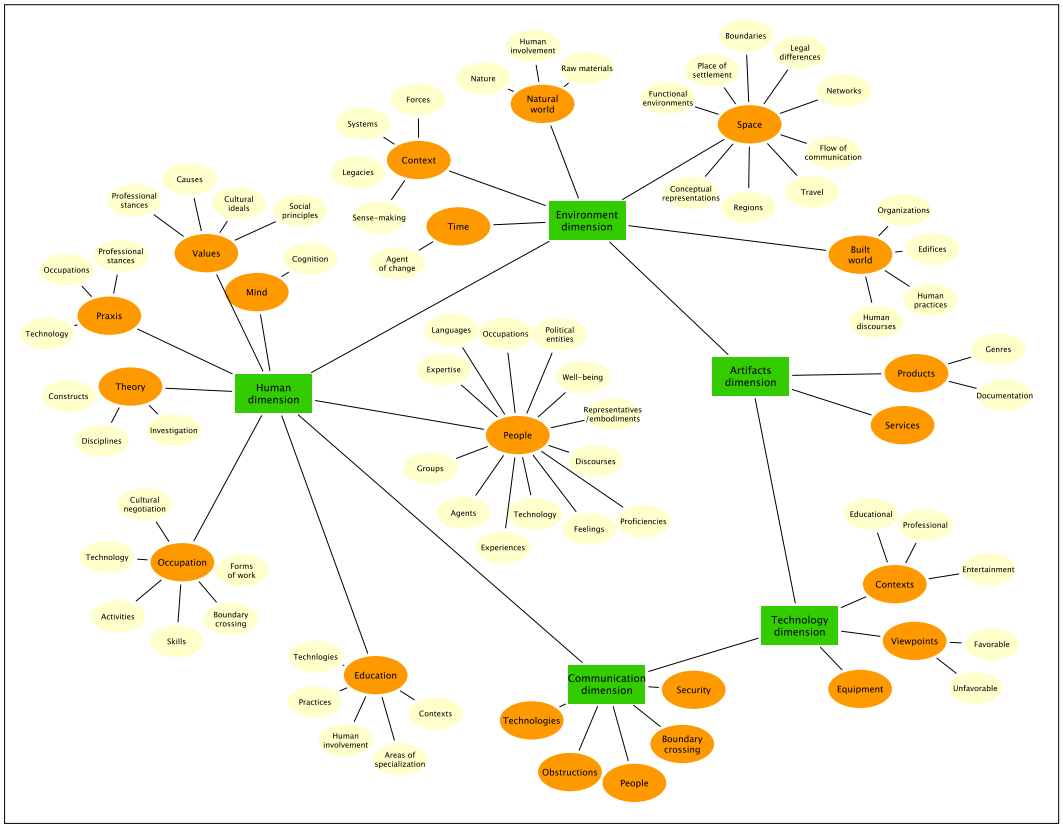
The map

The map of IPC contains five intersecting *dimensions*—environment, human, communication, technology, and artifacts (Figures 3 to 7)—and a varying number of topics per dimension. You can view the full map on page 10, below. You may also view it in full size online at http://connexionsj.files.wordpress.com/2013/05/ipc-map_1-1.pdf

Figure 2.

International Professional Communication map

(Click on map to view it in full size)

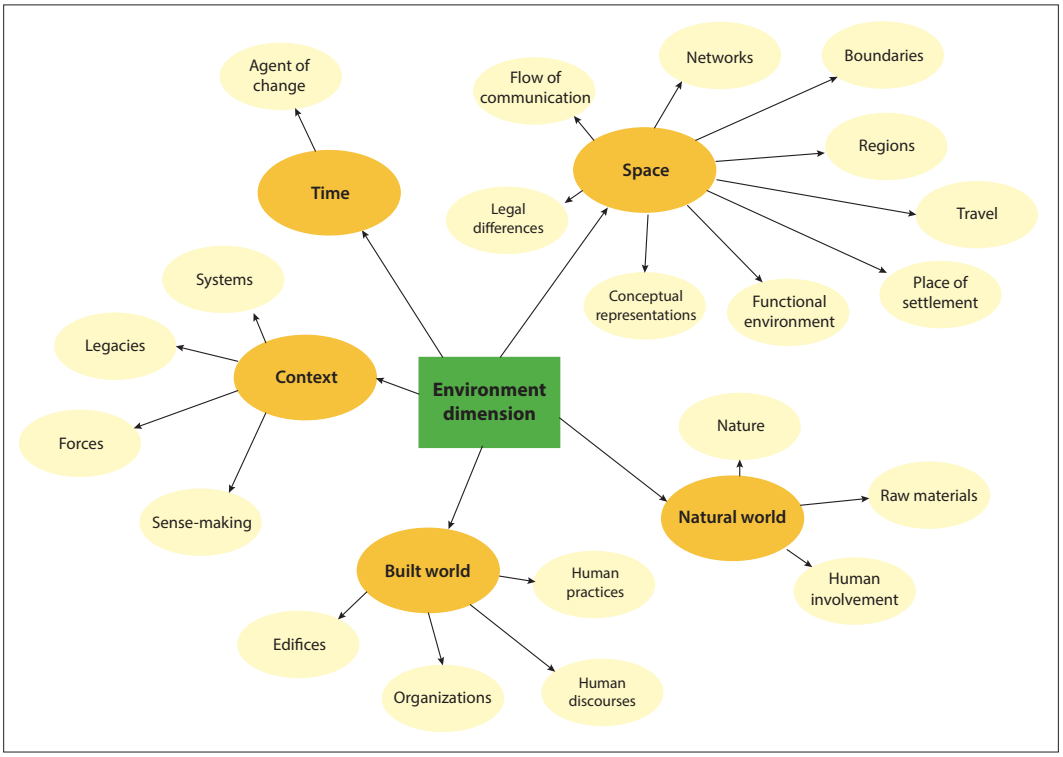


The environment dimension. The environment dimension of IPC (Figure 3, p. 12) comprises five topics: context, time, space, natural world, and built world.

Context. Agboka associates context with the "historical, legal, political, and economic" legacies and systems that continually shape human cultures and languages. For Fiola, context is the "market," or "labor market," a force that encroaches on the pedagogical mission of the

Figure 3.

The environment dimension in IPC



university and university professors. For Levi, on the other hand, context is the sense-making activity that librarians, archivists, and museum professionals perform, and which makes up for the incapacity of data-generating machines to build "connections and links . . . among disparate records that are often geographically dispersed, and in diverse formats."

Time. In Russell's prelude to this issue, time is portrayed as an *agent of change*. It brings about the "greater interconnectedness of international professional communication," particularly of "communication with

knowledge," as well as the internationalization/de-nationalization of the English language.

Space. Levi views space as *networks*, Brandt & Rice as *boundaries*—"borders and natural barriers" (Brandt & Rice). Other authors conceive of space as *regions* of the world. These can be geographic: continents, countries, cities, regions, territories, global, glocal, local (Arrizabalaga; Mattson; Muñoz Martín; Rice). They can also be geopolitical—"transnational," "international," "abroad" (Johnson-a; Rice)—or political-economic: "developed World," and "unenfranchised 'third' or even 'fourth world' nations" versus "industrialized nations (i.e., 'first' and 'second world' nations)" (Agboka; Tzanelli). Space is also a place of *travel* (Tzanelli).

Further, it is a *place of settlement*, e.g., "rural/urban *kampongs* (villages) (Mattson)." St. Amant relates space to *conceptual representations*—"flat earth model"—the *flow of communication*—"*friction points*"—and *legal differences* (St. Amant). Space is also a *functional environment*—as the "environments" that act as "transnational classrooms, a multidimensional public sphere accessible to people with Internet connection" (Tzanelli).

Natural world. The natural world is related to *nature*—ecological communities and "rainforest[s]" (Tzanelli)—and the *raw materials* that humans exploit: "rare earths," "thorium" (Mattson). The natural world is also a motive for *human involvement*—social and ethical concerns (Mattson), and political activism (Tzanelli).

Built world. The built world is directly related to *edifices*—"*kampongs* (villages)," "development spaces," "high-rises," "industrial complexes" (Mattson)—and the *organizations* that create and occupy them: educational (Fiola), corporate and business (Mattson; Varner), government (Mattson), and industrial (Agboka; Hopton).

The built world is also associated with *human discourses* and *human practices*: Varner speaks of businesses as sites of intercultural misunderstanding that require "active negotiation by both sides," while Mattson portrays multinational corporations as sites of technocratic discourses and practices that override the syncretic values of local cultures to attain their own profit-making goals.

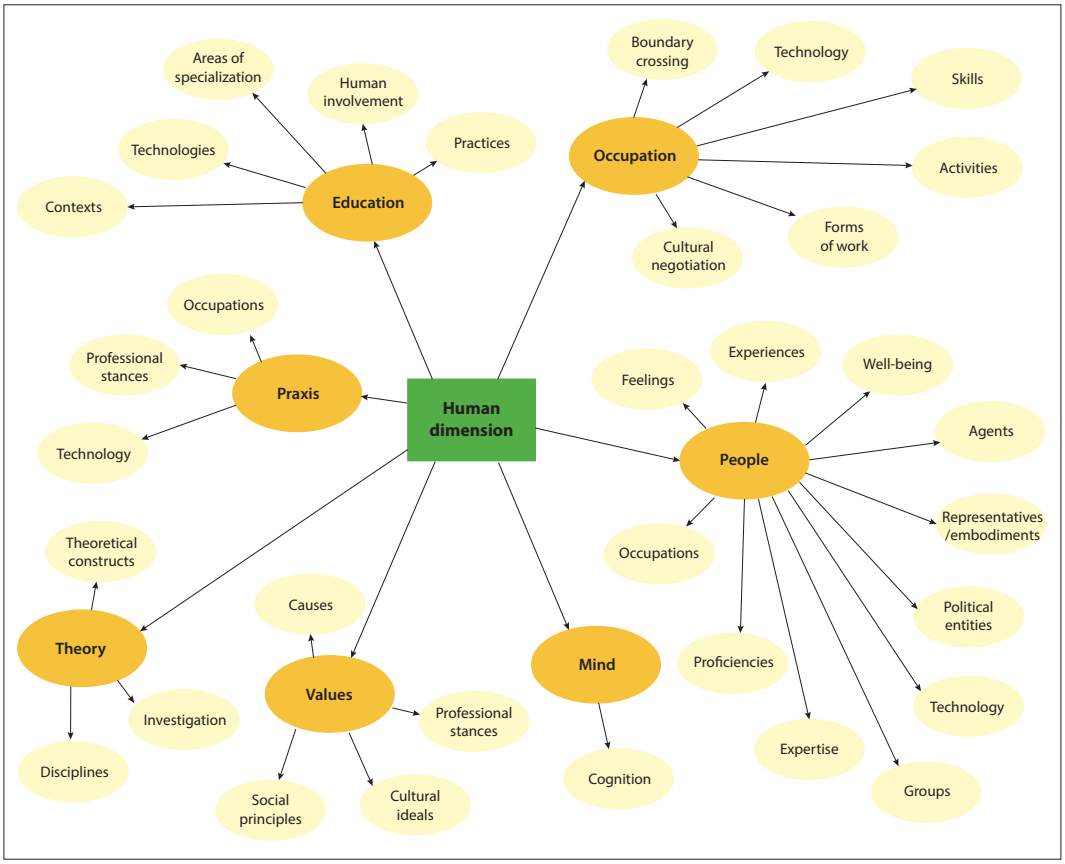
The human dimension. The human dimension (Figure 4, p. 15) figures prominently in IPC. It aggregates the interrelated topics of people, mind, values, theory, praxis, education, and occupation.

People. People are associated with *feelings* and *experiences*: "anger" (Mattson), "information needs" (Kely), "experience and emotional design" (Roy). They are also related to *language* and *discourses* (Muñoz Martín; Mattson). They are further connected to *well-being* and its absence: "health care" (Johnson-a), "epidemiological populations, medical conditions, and disease morphologies" (Brandt & Rice), "leukemia, still births, and severe mental disabilities" (Mattson).

People are envisioned as *agents* of information production and exchange (Byrne; Mason; Kelly), agents of change (Tzanelli; Walton)

Figure 4.

The human dimension in IPC



and oppression (Mattson), and agents of progress and destruction (Tzanelli).

People *represent/embody* organizations (Varner), abstract forces (Fiola; Mattson) and disincarnate entities (Mattson). People are *political entities*: "groups with incomplete civic rights and restricted access to representational centers" (Tzanelli). And they are intricately related to *technology*: people use tools (Brandt & Rice; Mason), and exist alongside and as crucial complements to machines (Levi).

There are *groups* of people, based on gender (Mattson), languages (Russell), nationalities (Varner), ethnicities (Agboka), autochthony (Tzanelli), or role in professional interchanges (Johnson's "teams"; Brandt & Rice's "patients"; Byrne's "users").

People have different *occupations*. They are authors, scholars (Levi), instructors, trainers (Fiola), students (Johnson-a; Johnson-b) and professionals in training/"future professionals" (Arrizabalaga; Fiola), practicing professionals (Brandt & Rice; Hopton), "consultants" (Mason), "integrated writers (e.g., engineers, general managers, accountants, health technologists)" (Spinuzzi & Jakobs). People are also classified by their *proficiencies*—"skills" (Johnson-a)—and level of *expertise*—"specialists," and "non-specialists" or "non-expert[s]" (Fiola; Hogan).

Mind. The mind is the locus of *cognition*: Brandt & Rice speak of "divergent thinking," Agboka of "interrogating," Byrne of "reassessing," St. Amant of rethinking and "finding," Johnson-a of "problem-solving," Hogan of "constructivism," and Levi of "the way we conceptualize, interpret, and interact with our cultural heritage."

Values. Values are related to *causes* (Tzanelli; Walton), *social principles* (Agboka) and the *cultural ideals* of specific groups (Mattson). Values are also connected with *professional stances* (Hopton).

Theory. The authors speak about *theoretical constructs* such as theories (Hogan), models (Arrizabalaga; Rice; St. Amant), approaches (Roy), paradigm shifts (Agboka). They also refer to *investigation* (Byrne; Roy;

Spinuzzi & Jakobs).

Several authors speak about specific *disciplines*, their intersections, and characteristics (Durão; Hogan; Muñoz Martín; Roy; Varner).

Praxis. In IPC, praxis is related to *occupations* (Brandt & Rice), *professional stances*—ethics and a critical outlook (Hopton)—and the ability to use *technology* to communicate across geographical and cultural boundaries (Brandt & Rice).

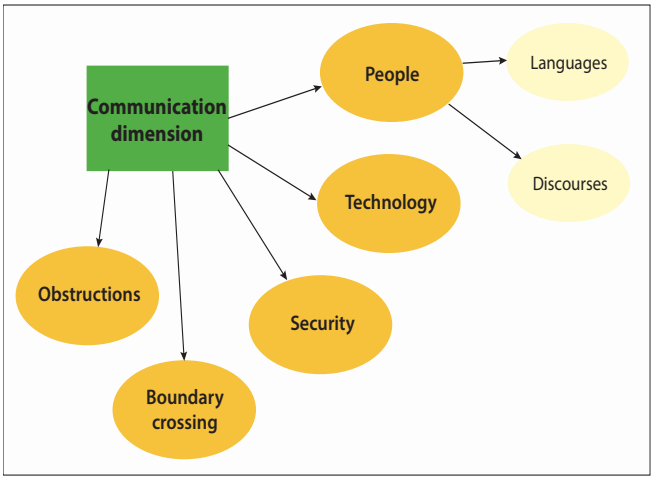
Education. The papers in this issue relate education to academic, professional, and international and cross-national *contexts* (Johnson-a; Johnson-b; Tzanelli; Rice). They associate education with different *areas of specialization*—medical communication, technical communication, translating (Rice; Muñoz Martín).

The authors also connect education to *technologies* (Johnson-b), and they view it as an arena for *human involvement*—to promote civic and political engagement (Walton; Tzanelli). They also speak about current educational *practices*, e.g., pedagogical methods, programs, curricula (Arrizabalaga; Muñoz Martín; Rice).

Occupation. In IPC, occupations are related to *boundary crossing*—of physical, time, national, and language borders (Brandt & Rice; Johnson-b). They are connected to *technology* (Levi; Mason). Occupations in IPC include *skills*, and *activities* that are specific to international contexts, such as translating (Fiola). They also encompass different *forms*

Figure 5.

The communication dimension in IPC



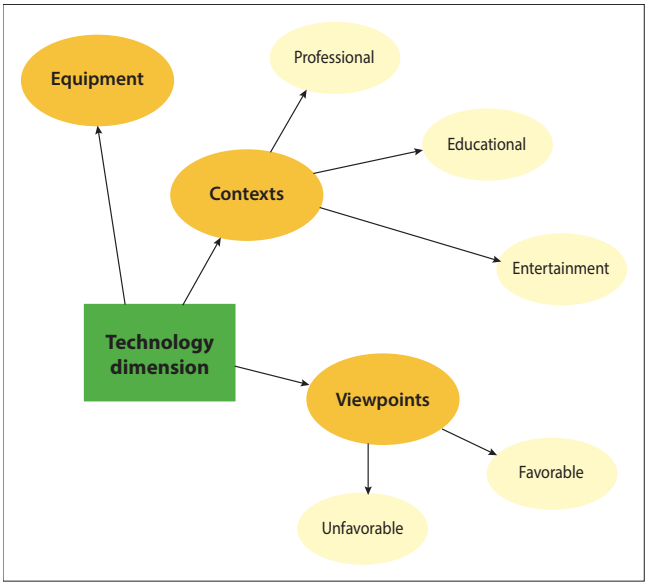
of work (Spinuzzi & Jakobs), and different processes of *cultural negotiation* (Varner).

The communication dimension. The communication dimension of IPC (Figure 5) is associated with *people* (Johnson-b; Varner), and their languages and discourses. It is also connected to *technology*, and *security* concerns (Brandt & Rice), *border crossings* (Spinuzzi & Jakobs), and specific types of *obstructions* (St. Amant's *friction points*).

The technology dimension. The technology dimension of IPC (Figure 6, p. 19) is connected to *equipment* (Levi; St. Amant), and *professional contexts*, *educational contexts*, and *entertainment contexts* (Brandt & Rice; Johnson-b).

Figure 6.

The technology dimension in IPC



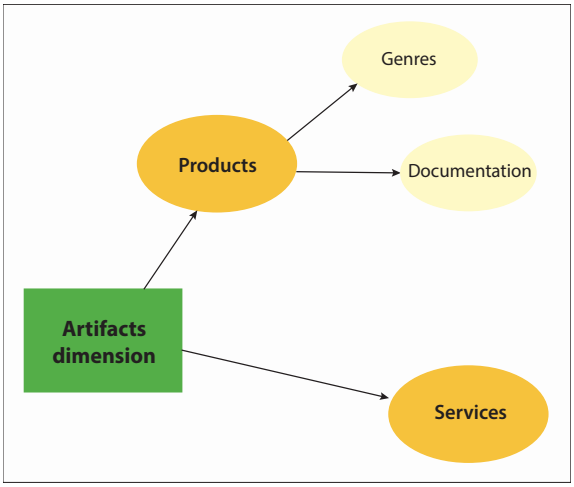
But technology is also related to different *viewpoints*. These can be *favorable*—for Mason, technology enables interaction, work, research and teaching, for Levi, it enables the "flow of information . . . in lightning speed"—or *unfavorable*: for Tzanelli, technology promotes narratives fraught with "ethical dilemmas," and Kelly associates it with problematic "intercultural exchanges."

The artifacts dimension. The artifacts dimension of IPC comprises products and services (Figure 7, p. 20).

Products. *Products* refer both to specific *genres* (Hogan; Johnson-b; Mason; Tzanelli) and to *documentation* in general: "texts"

Figure 7.

The artifacts dimension in IPC



(Spinuzzi & Jakobs), "genres" (Kelly; St. Amant), "technical documentation" (Hogan), "software documentation" (Hogan).

Services. *Services* are connected with various sectors: healthcare, entertainment, education, communication (Brandt & Rice; Tzanelli; Fiola; Spinuzzi & Jakobs).

Navigating international professional communication

This map of IPC attests to the complexity of the world we live in when, for instance, the topic of human involvement is connected to education and the natural world, and boundaries and boundary crossings are related to space, communication, and occupations.

But is the map answering the questions I formulated at the beginning of this editorial, taking the lead from Lovitt back in 1999?

In other words, are we any closer to knowing the "critically important" topics for IPC? Are we still studying IPC from the perspective of "allied disciplines"? And are we closer to creating a distinctive identity for IPC?

The answer to the first question is yes, we are closer to understanding the critical topics in IPC. They are the *world* as a place that needs to be traversed physically and virtually, yet which is also in peril. They are *technologies* as unique enablers of professional communication and entertainment; and as both ineradicable partners of our world, and potentially dangerous intruders in it. They are *people* whose concerns, desires and well-being are valued, who are morally bound as professionals and citizens, and who are the ultimate guarantors of efficient and effective professional communication. They are also *education* as a platform to prepare students and professionals to smoothly navigate this landscape. Topics like translating, skills, culture, legal issues, information design, collaboration, ITexts, and artifacts all latch onto these critical issues.

The answer to the second question is yes. We are still studying IPC from the perspective of allied disciplines, as the abundant references to technical communication, intercultural communication, and translation demonstrate.

The answer to the last question is also yes. We are, thanks to you, closer to creating a distinctive identity for IPC.

Welcome to *connexions*! ■

Acknowledgements

I wish to thank the many people and institutions that have contributed to the journal: the authors who answered the call for papers for this issue, eagerly went through the review process, and patiently waited to see their articles published; the current and previous members of the editorial board who believed in the project and so generously gave their time and expertise to it; the Department of Communication, Liberal Arts, Social Sciences at New Mexico Tech for housing the journal after I moved to the university; and Barbara Bonnekessen, Elizabeth Kramer-Simpson, Maggie Griffin Taylor, Rich Rice, and Roland Rowe for their meticulous and rigorous comments on this editorial.

I am indebted to Charles Kostelnick for sponsoring the year I spent as a research scholar at the Department of English, Iowa State University, immersing myself in professional communication and information design; and for speaking of *connexions* as though it were written in stone. I thank, too, Fundação para a Ciência e Tecnologia for the postdoctoral research grant (SFRH/BPD/43227/2008) that enabled me to lay the foundations for the journal, and João Ferreira Duarte and the Center for Comparative Studies of the University of Lisbon for generously welcoming the idea and providing a home for the journal until July 2012.

Notes

[1] The 2011 earthquake, tsunami, and nuclear power plant disaster in Japan is not the focus of this paper. It is, rather, an example among others I could have chosen—like the *Deepwater Horizon* or the *Exxon Valdez* oil spills—to illustrate that the world is a network of objects, human and other animals, systems, etc., and that IPC is instrumental for the safety, engagement, and actions of humans, I do not cite individual sources in the text and the References section of this paper.

Instead, in the next paragraph I include the titles of the magazines, newspapers, and news agencies whose pages I visited, and from where I accessed the articles and multimedia artifacts I found relevant. I hyperlinked the titles of the periodicals and the special issue from *Nature* magazine, as well as the names of the newspapers and news agencies to the online resource.

The information for the first seven paragraphs of the "Envisioning the world today" section of this paper was collected from the following online sources: (1) *Nature* magazine's special issue on the "Japan earthquake and nuclear crisis," and (2) searching *Scientific American*, and *Science* magazines, as well as *Agence France-Presse*'s English edition, the *BBC*, *Inter Press Service* news agency, *Reuters*' US edition, and *The New York Times* for the expression "Japan 2011 earthquake, tsunami, nuclear power plant."

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INTERNATIONAL PROFESSIONAL COMMUNICATION

Yesterday < Today > Tomorrow

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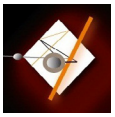
As the editor of a sister journal, *Journal of Business and Technical Communication* (JBTC), I congratulate *connexions* on its birth, exactly 25 years after JBTC was born[1]. The title *connexions* summarizes for me the great movement of the last 25 years and, if I may presume, the movement of the next 25 years, toward greater interconnectedness of international professional communication. Many in this issue will doubtless speak of the ways technology has transformed professional communication itself. It certainly has, and will.

But a key factor in this technological revolution in communication is that it connects—even at times merges—communication with knowledge. Professional communication is now inseparable from databases, and professional communicators, increasingly, are inseparable from programmers. A major conference in North America for professional communicators has become SIGDOC, the Special Interest



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Group on Design of Communication of ACM, the Association for Computing Machinery.

This vast change has been termed the IText revolution, a term coined a decade ago in JBTC to describe the impact of information technologies with texts at their core. These ITexts, its original manifesto claimed, represented "a new page in the story of the coevolution of humanity, culture, and technology," promising to change both the nature of texts and their role in society (Geisler 2011). That change has occurred, is occurring, and will continue to occur, as social networks, data harvesting, and a thousand other technologies have text at their core. This is revolutionizing communication by connecting text with all other semiotic modes, with vast databases capable of tremendous good (e.g., democratic revolutions mediated through social networks) and tremendous evil (e.g., global invasions of privacy). The revolution connects the private with the professional, the home with work and, at bottom, the I with the Other, as never before. And for all of this there must be research to make sense of this impact of IText on all of us. And that is why *connexions* and journals like it are so important.

A second meaning of *connexions*—the journal and the concept—is terribly important for the future. And that is the connection among people who speak different languages and come from different cultures. English has become, ironically, the lingua franca (Latin for French language) of the professional world. Fortunately, in the US, where I work, there is an increasing recognition that English is becoming an international language, that native speakers no longer "own" English—as if they ever did. Speakers of English as a mother tongue are a minority

of English speakers in the world, and in professional workplaces and organizations worldwide, it is likely that in any given meeting, speakers of English as a mother tongue are the minority. And through the professional and cultural connections, English is being transformed. That is a very good thing. And this is true, increasingly, in professional communication research and teaching as well. We minority speakers of English as a mother tongue must cede to the world our language, to find the *connexions* we need.

So Viva *connexions*! ■

Editor's Note

[1] This article was written in 2012, when the *Journal of Business and Technical Communication* was 25 years old.

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THINKING ABOUT SOCIAL JUSTICE

Interrogating the *international* in international technical communication discourse

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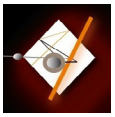
Keywords. Social justice, Unenfranchised, Intercultural communication, Democratic, Globalization.

> Our field is deeply involved in the complex processes of globalization, processes that not only entail opportunities and benefits for businesses, professions, and human lives but that also often sweep through cultural, social, environmental, and economic domains in destructive ways (Savage & Mattson, 2011, p. 5).

Overview

Intercultural technical communication is a very prominent feature in technical communication (TC) discourse (Agboka, 2012), but its social justice implications have yet to be fully investigated. Thus, social justice research in TC has not kept pace with the explosion of work in



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intercultural technical communication. Yet, technical communication continues to shape human lives in international contexts in many ways. In his keynote address at the 2002 Council for Programs in Technical and Scientific Communication (CPTSC) meeting, Huckin (2003) questioned why little attention was given in the field of TC to the "sociopolitical aspects of globalization" (p. 1). Cognizant of Huckin's concern, Grabill (2005) called for a pedagogy of civic engagement to train "educated people capable of thinking critically about the sociopolitical issues" (p. 276). Has our current research and scholarly trajectory addressed these concerns?

As a scholar committed to social justice, I call for a paradigm shift in international technical communication (ITC) research and scholarship. I invite more research and scholarship involving specific case studies, research methodological approaches, and analyses of communication practices that intersect with social justice in international contexts, particularly in areas that have become known in political-economic discourse as unenfranchised "third" or even "fourth world" nations—many of which are affected by technical communication practices and discourse.

My call is circumscribed in my belief that, on a national level at least, the industrialized nations (i.e., "first" and "second world" nations) can fend for themselves very well. Thus, generally, issues of cultural accommodations, localization, translation, and so forth between the US and Western Europe, China, and a number of Middle Eastern nations are primarily matters of more efficient marketing and maintaining competitive edges among a more or less equal pack of

multinational companies. However, it's an entirely different set of stakes when it comes to much of Africa, South East Asia, Central and South America, among others. Of course, this does not mean there are not marginalized, colonized, continually exploited, and oppressed cultural groups within first and second world nations. For example, in many "developed" sites throughout the world there is a loose confederation of indigenous peoples that refer to themselves as the fourth world (e.g., Native Americans, Alaska Natives, and numerous ethnic groups elsewhere, including Australia, New Zealand, Scandinavia, and possibly almost every nation on earth), who also deserve attention.

Ultimately, as Savage and Mattson (2011) argue, our obligation is to ensure social justice for marginalized groups of people who may lose more than they gain from the effects of intercultural communication and global business (p. 5). But how do we undertake this task of activism?

International Technical Communication (ITC) So Far

The trajectory of intercultural technical communication research over the years points to many positive possibilities—albeit needing a consistent paradigmatic shift in focus. For example, since its evolution more than two decades ago, the emerging field of ITC has made useful gains through translation objectives (Byrne, 2006; Hann, 2004; Maylath, 1997; Sager, 1993; Somers, 1996; Weiss, 1995), localization practices (Hoft, 1995; Hunsinger, 2011; Major & Yoshida, 2007; McCool, 2006; Sun, 2004, 2006, 2009; Thayer & Kolko, 2004; Warren, 2002),

innovations in pedagogical approaches (Boiarsky, 1995; Bosley, 2001; Goby, 1999; Thrush, 1993; Tippens, 1993), and cross-cultural collaboration projects (Bosley, 1993; Starke-Meyerring, & Wilson, 2008). Ultimately, scholarship in these areas has broadened our understanding of the relevance and merits of language, culture, usability, and contexts in ITC settings.

As Agboka (2013) notes, however, more often than not culture and language are singled out—or overemphasized—as heroes in international technical communication success stories, usually neglecting the role of broader ideological, legal, political, economic, and social justice issues in the practice of technical communication in international contexts (p. 29). When we become too fixated on these factors alone, we risk not understanding them (i.e., language and cultural factors) as always already tied to their historical, legal, political, and economic contexts.

In essence, the challenges of intercultural technical communication go beyond just language and culture. As the field of professional and technical communication crosses borders, technical communication becomes a site of struggle where power, ideologies, and identities are constituted, reconstituted, shaped, and reshaped through the intricate interactions between such complicated factors as culture, language, ideology, and communication (Bokor, 2011).

Case Study Research

I have been conducting three installments of a case study research that investigates the marketing and distribution of intercultural pharmaceutical products in two cultural contexts (i.e., some sites in South East Asia and Ghana). In the first installment—which employs action research strategies, and based on which conclusions are drawn in this article (Blyler 1998; Grabill, 2000; Clark, 2004; Craig, 2009)—I investigated the poor efforts of designers in the transfer of communication supporting aphrodisiacs designed in one cultural context and transported to another cultural context. As a consequence of designer marketing priorities and weak political border systems prevailing at the user's site, the documentation accompanying these aphrodisiacs was not only provided in a language inaccessible to users, but those that met the linguistic requirements were also poorly situated culturally.

The findings of the research point to how designers/manufacturers taking advantage of weak legal, economic, and political systems in the target culture circumvented important legal, ethical, cultural, and linguistic issues prevailing at the target culture, thus resulting in usability and health problems for the users.

The Way Forward

It is my position that the existing approaches to ITC are not very effective in helping address current challenges and emerging demands in specific cultural sites. Yet, admittedly, the issue of what should be done is not simple, linear, or clear-cut, as it requires complex practices and research studies in specific sites.

What is crucial, though, is that the field of technical communication needs a coherent body of methodological, research, and scholarly approaches that

- are cognizant of local contexts and their histories;
- will reach out in more democratic and liberatory ways; and
- serve the needs of both designers and users.

A good starting point is to (re)examine approaches and objectives of international technical communication, particularly in this age of postmodern globalization. Furthermore, we need to assess whether these objectives can help us meet the challenges of globalization. Doing these can provide more effective resources for training students, practitioners, and professionals for successful intercultural technical communication, beyond the instrumental angle of technical communication. ■

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FOUR MODELS AND A CHALLENGE

Past, present, and future of translator training programs in Argentina

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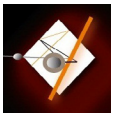
Keywords. Translation studies, Training programs, Didactic models.

Argentina has a long-standing tradition in translator training (Granero de Goenaga, Brígido, Celi, Lupotti, Maccioni, & Toniolo, 2008)[1]. This article has two purposes. On the one hand, it seeks to describe four translator training models prevailing in Argentinean universities, especially at Comahue, Córdoba, and La Plata universities (Arrizabalaga, 2010; 2012). I will discuss the application of such models in relation to the students' foreign-language training prior to and throughout their undergraduate education. On the other hand, I will present a new translator training model that aims to develop research skills in students, which might foster under-



graduate education in research. The need to build students' research competence is backed up by the fact that translation studies [TS] is, at present, a vacant research area in the country (Hurtado Albir, 2003; Mayoral Asensio, 2001).[2]

Argentina has been dominated by strictly linguistic graduate teaching models. Upon close inspection, the curricula of the translation programs in the above mentioned universities are all based on the same theoretical concerns, namely

1. genre description,
2. terminology,
3. translation techniques,
4. discourse analysis.

Each of these concerns is in turn related to a specific translator training model, i.e.,

1. the *communication model*,
2. the *information model*,
3. the *sequential model*,
4. the *linguistic model*.

The *communication model* implies working with descriptions of generic formants, which can vary according to cultural contexts, or language register. The *information model* is a terminology-bound teaching framework that relies on the study of word-formation and word choice depending on text-types and language register. The *sequential model* emphasizes the role of translation techniques in each step of text composition, and throughout the phases of translation commission.

In the *linguistic model*, translation patterns are dictated by discourse segmentation and language strategy detection, as in the classification of frequent collocations and grammar structures.

The use of these four models is a direct response to the officially monolingual status of Argentina, where foreign languages are acquired through "laboratory experience" (Castro, García Álvarez, Monteserin, 2010). Most foreign language students in the country attend 50-minute classes twice a week over a period of four to five years. The syllabi in undergraduate translation programs are markedly aimed at training students in the specifics of phonetics, grammar and use of foreign languages. Consequently, university professors face the extra challenge of having students learn and polish the foreign language in their translation classes, integrating different language pairs—English > Spanish, or French > Spanish, and others—into classes.

As a consequence, there is a deplorably narrow margin for students to acquire competences other than the linguistic one—the ability to carry out research being one of those. In order to subvert teaching-learning practices fixated on the development of linguistic competence, a different translator training model needs to be implemented. I call this the *knowledge model*. Its application will lead students to perform and analyze translation using "a language informed by TS."

The knowledge model involves case description with TS categories. It starts with exploratory tasks of source text recognition, moving to the production of a target version. In the knowledge model, the analyst—student—view is focused on

1. market—functional—demands that account for the production, circulation and consumption of translations,
2. criteria of acceptability of translations as products that meet the expectations of consumption niches,
3. identification of translation products as independent from source language versions.

I claim this to be the standing position from which TS should be introduced in translator training programs in the country (Hurtado Albir, 2003).

Developing critical thinking informed by TS theories is key to training students in doing research in the field (García Izquierdo & Verdegal, 1998). Only by familiarizing students with categories and methodologies proper to TS can we expect to enlarge the number of competent, qualified translation scholars in Argentina.

The urgency of tailoring translation curricula in keeping with the knowledge model responds to

1. a notorious absence of scientifically informed metalanguage on the part of students discussing their own production,
2. unwanted use of categories and theoretical frameworks from fields other than TS—in translation programs!—(Mayoral Asensio, 2001),
3. TS being a vacant research area in the country (as explained above),
4. Argentina's marginal position in TS theory production worldwide (Granero de Goenaga et al., 2008).

Needless to say, the knowledge model is not without challenges. In its implementation, several issues of the Argentinean education system and of the international TS scientific community need to be addressed. These include

1. administrative, budgetary, and ideological aspects falling within the realm of university policies (Coiçaud, 2008),
2. the absence of a dominant research paradigm in TS (Mayoral Asensio, 2001; Moya, 2004),
3. the blending of "conceptual" and "contextual" didactics (Páez, 2007).

Only by tackling such issues at a local level can we expect to meet teaching and research needs on the global arena. ■

Notes

[1] Translators graduated from Comahue, Córdoba or La Plata universities often face no difficulties finding a job. Graduates at large claim that their education is highly priced in the US and Europe—if they go to work abroad—and even if they stay at home and work as in-house translators for either local or international clients. A visit to the translation company Eriksen Translation, Inc. shows that university educated Argentinean translators are perfectly qualified for coping with the demands of the translation market (see at http://www.eriksen.com).

[2] In Argentina, vacant research areas can be indicated by the National Scientific and Technical Research Council [Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET)] standards. As a matter of fact, CONICET is the most prominent research agency in the country, promoting research in areas which are statistically vacant, and with less than three CONICET affiliated researchers for each translation department at Comahue, Córdoba, and La Plata

universities, for instance. This, in turn, sheds light on the fact that TS does not "stand on its own" in this agency, i.e., TS "falls within" the large KS2 category for Literature, Linguistics and Semiotics. So if a CONICET affiliated TS researcher specializes in, for example, literary translation, he has to "reposition" his work either in the field of literary studies, linguistics, or semiotic studies.

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MOBILE MEDICINE AS EFFICIENT AND EFFECTIVE INTERCULTURAL HEALTH COMMUNICATION PRAXIS

Richard Brandt & Rich Rice

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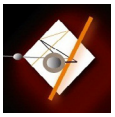
Keywords. Mobile medicine, Divergent thinking, Problem-based learning, Telemedicine.

Mobile medicine is a tablet-based, collaborative learning paradigm, applying principles of telemedicine to leverage mobile, affordable, and ubiquitous Wi-Fi enabled devices. Through the use of video conferencing to transfer relevant medical knowledge, mobile medicine processes facilitate customizable peer-to-peer (P2P) medical consultation across rural, underserved, and urban communities.

Although some platforms are HIPAA-certified to ensure patient privacy and information security, which is considered a component of providing ethical care, the increased need for care and the decreased availability of medical personnel in some remote and under-developed countries may supersede patient privacy expectations. Real-time P2P video consultation sessions are not usually recorded or archived, for instance, thereby mitigating some patient data security issues or ethical breaches.



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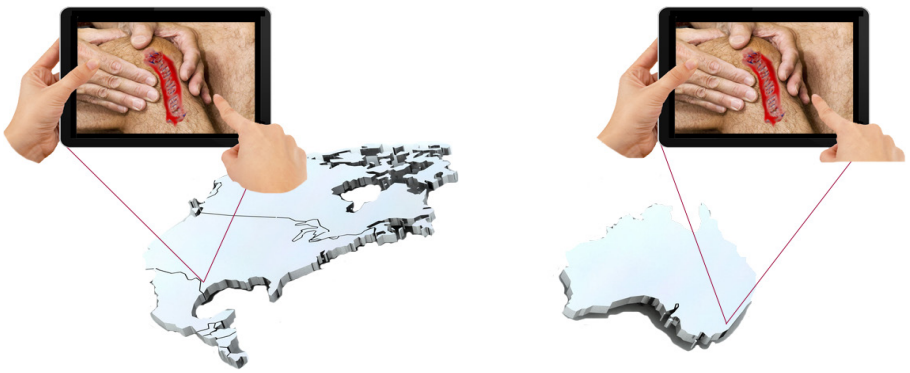
The healthcare industry is just beginning to understand and implement mobile medicine praxis, and absolutely must explore further system-wide application. Utilizing mobile medicine effectively and efficiently over geographical distances and between a variety of cultures can establish and strengthen intercultural healthcare communication globally, educating clinicians via exposure to remote case studies, as well as educating patients with greater access to medical expertise.

Dermatology clinical practice, for instance, relies extensively on visual information (Whited, 2001, p. 59; Williams *et al.*, 2001, p. 145), as do several other healthcare specialties, making them well-suited to utilize recent advances in mobile tablet devices that offer higher resolution retina displays and video conferencing applications, such as Apple's FaceTime®. Similar to placing a cellular phone call, healthcare professionals with camera-ready mobile devices, videoconference technologies, and reliable Web 2.0 access may open a live, real-time, mobile, audio-video connection while examining a patient during a routine office visit or at a patient's hospital bedside (see Figure 1).

Figure 1

Mobile medicine collaboration



In medically advanced countries, mobile medicine praxis offers new opportunities for P2P medical consultation, while supporting traditional social constructivist and problem-based learning (PBL) learning models familiar to healthcare professionals—patients and practitioners work together to socially construct etiologies and identify diagnoses. PBL is a student-centered approach to learning, designed to create practical and personally motivating assignments (Gallow, 2012) and "just-in-time" diagnoses. The fact that "a whopping 75 percent of US physicians own some form of Apple device" (Miliard, 2011) suggests that both interest and infrastructure can be easily put into place. Further, the Apple FaceTime® platform is "HIPAA compliant and encrypted" (Chan, 2011), which has garnered support from clinicians in urban centers and industrialized nations. Other platforms, software, and networked solutions will follow.

If developed, tested, and utilized effectively, such paradigms will augment healthcare delivery efforts in rural and geographically distanced clinicians, using principles of media naturalness to approximate face-to-face (F2F) communication as closely as possible. This will expand divergent thinking, motivating patients to be more proactive, and align several universal designs for learning approaches, mitigating any ambiguity and enhancing cultural acceptance of virtual interaction. A patient with a unique condition in Stratford, Texas, could be digitally presented, in real-time, to a specialty physician in Houston, Texas, nearly as authentically and perhaps even more conveniently and cost-effectively than being F2F.

Such protocols can, further, be designed to implement global delivery of medical care to underserved and undersupplied communities. "According to the WHO, among 57 countries, mostly in the developing world, there is a critical shortfall in healthcare workers, representing a total deficit of 2.4 million healthcare workers worldwide" (Vital Wave Consulting, 2009). Many rural areas, such as Ragihalli, India, have strong cellular signals and technological infrastructures (Levy, 2011, p. 2). Thus, a general family practice physician in Ragihalli could seek a P2P consultation from a specialist in Mumbai, Kolkatta, or Bengaluru, and do so from the patient's bedside, thus supporting inter-regional medical collaboration and increasing self-guided medical learning.

This is readily accomplished using a mobile device weighing a mere 1.46 pounds (662 g) (Apple, 2012). Less expensive mobile devices, such as India's Aakash, will only increase affordability. And more expansive scenarios of intercultural healthcare communication and international medical collaboration, across borders and natural barriers, may further be realized. For instance, a physician in Puerto Limon, Costa Rica, can receive diagnostic and treatment advice through real-time video from another physician at a major university hospital in Miami, Florida. Conversely, London physicians can collaborate with doctors in developing countries, especially if a patient has returned to the city from that same developing region with unique and unexplainable symptomatology.

It is imperative for telemedicine practitioners, developers, and scholars to realize that the transfer and utilization of relevant medical

knowledge is not concretely situated in a vertical, top-down educational vacuum. Instead, we must embrace multidirectional information exchange across geographical regions, epidemiological populations, medical conditions, and disease morphologies.

Healthcare consultation, evaluation, education, and even treatment delivery could be implemented locally, expanded regionally, and enhanced globally via mobile medicine praxis. And this could be done with ubiquitous, affordable, and consumer-grade devices over already-developed international cellular infrastructures that can emphasize data security and ethical use. ■

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SEEING THE WOOD FOR THE TREES

Reassessing research agendas in specialized translation

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Keywords. Technical translation, Specialized translation, Communication, Usability.

In 2005, at a conference in Dublin City University, the noted Chinese translation scholar Jin Di once praised the standard of papers presented by the young researchers but marveled at how incredibly specialized they all were (2005, April). This last point seems to encapsulate some of the difficulties facing professional communication research, and in particular specialized translation.

In our efforts to better understand translation, many researchers have become more and more specialized, concentrating on and researching ever-smaller and more highly focused areas. But has this come at a cost? Are we missing out on useful knowledge simply because it is outside of our area?

There is a case for widening the scope of translation—and indeed professional communication—to encompass the broader communication community as a whole because, ultimately, we are all concerned with communicating information effectively. Surely the relatively ancillary modalities of individual languages come a fairly distant second?

Taking technical translation as a case in point, surely it makes sense to subsume it under the general heading of "technical communication"? In this way, we can collaborate more effectively with colleagues who are also concerned with communicating technical knowledge, such as technical writers, instructional designers, journalists and educators. We can then draw on knowledge and research into usability, interaction design, education and so on to help us enrich our own work.

Calls for this approach are not new. Byrne (2006), Schrijver and Van Vaerenberg (2008), and Schubert (2009) have all called for technical translation to be regarded as a form of technical communication, not as a separate area. But there is a certain level of resistance or, at best, apathy to this. In particular, areas such as usability are dismissed by translation scholars on the basis that they are cumbersome, expensive and unwieldy or only applicable in certain circumstances. This is a far from satisfactory justification, not least because the technical communication sector—in its traditional, monolingual sense—has been using usability principles to assess and improve the quality of original language documents for quite some time, without incurring excessive costs or expending vast amounts of effort.

So why is it that some within the translation community seem to regard usability as too complex, too time consuming and too expensive to apply to translation? Is translation so inherently complex that anything beyond checklists or comparisons between source and target text is simply unworkable? It could be argued that the primary reason is an unwillingness to step outside the traditional confines of translation studies. This bunker mentality does little to further our research and is impossible to justify.

Similarly, issues such as instructional design and structured writing have received little attention from technical translation scholars. Presumably the argument being that such fields require interventions in the target text that go beyond the remit of the translator. But if such interventions involve restructuring information, adding information, or changing the focus of a text to better accommodate the target audience and improve the effectiveness of the translational communication, then where is the problem? Postcolonial, feminist and political translators have been doing this for decades (see, for example, Bassnet & Trivedi, 1999; von Flotow, 1997).

If the current research trend continues there is a very real risk that we will examine smaller and smaller issues until we lose sight of the wider picture. We want to avoid the situation described by Nobel Laureate Konrad Lorenz where we become the embodiment of the clichéd specialist who knows more and more about less and less until finally we know everything about nothing. ■

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SHOULD THE MARKET DICTATE THE CONTENT OF SPECIALIZED TRANSLATION CURRICULA?

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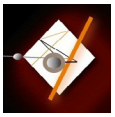
Keywords. Translation curriculum, Market-driven learning objectives, Professional translation, Specialized translation.

When translation educators discuss specialized translation, they seem to have trouble agreeing on what constitutes specialized translation and, more fundamentally, what is a *special language* (Scarpa, 2010). For some, it refers to the translation *process*; in other words, specialized translation is synonymous with professional translation. For others, the translation of any text that refers to a specialized subject is *ipso facto* specialized. Those tend to oppose specialized translation and general translation. Still others feel that only the translation of texts aimed at specialists should be considered specialized, opposing the translation of texts by and for specialists to texts *by* specialists *for* non-specialists. While this variety of opinions fuels academic debate, it also brings into focus the fact that specialized translation instructors often lack a



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clear mandate. This lack of clarity is sometimes the target of criticism, especially outside academic circles.

In this position paper, translation is specialized when it deals with content and format bearing characteristics that can be attributed to an area of specialized knowledge. These characteristics may be lexical or syntactical in nature. For example, a text referring to a medical procedure, whether aimed at specialists or at the general population, is specialized due to its terminological content, and its translation is therefore specialized. Another characteristic is that, while these specialized texts may be written *by* specialists *for* non-specialists, they may also be written for specialists in the field, increasing the risk of implicitation, hence the need for specialized translators to have as thorough as possible a theoretical knowledge of the field in which they translate. This makes training specialized translators a challenge.

In 1999, the Canadian Translation Industry Sectoral Committee (CTISC, 1999) tabled a report containing a number of recommendations to help strengthen the Canadian translation industry. Some of the recommendations were related directly to the training of future translators. Specifically, the Committee lamented the fact that recent translation graduates seem to lack knowledge of general culture and specialized training (CTISC, 1999, p. 89). This means that the ideal student would have more general knowledge and more specialized training while, paradoxically, having less general training and specialized—theoretical—knowledge. Such recommendations were puzzling at best. Nevertheless, many universities changed their curricula to include more practical courses and fewer theoretical courses, in part be-

cause it was what the translation industry wanted (Fiola & Cormier, 2011).

No one will deny that future translators should be well prepared to meet the expectations of their future employers. However, employers seem to believe that knowledge acquisition ends with graduation, and that translation curricula should train fully operational translators with specialized translation competence.

If this were to be used as the guiding principle behind translation curriculum design, which area(s) of specialization should become the focus of translation curricula? Presumably the ones that are currently most in demand should be the obvious choices. Nonetheless, even if universities were to shape their curricula around these highly volatile areas of specialization, it would still take a few years for translation students to complete the curricula, and by that time the demands of the market might have changed. Ten years ago, the word "localization" sent translation schools scrambling to develop new programs. These days, that same word is conspicuously absent from curricula; localization programs appear to be a thing of the past, at least in Canada. That does not mean that localization is absent from the translation classroom; it is no longer the subject of dedicated programs, but is, rather, integrated in translation curricula (Université de Montréal, 2012). This change is also due to a lack of interest in those potential students for whom these programs were designed (Fiola & Cormier, 2011).

Translator educators should never forget that their role is not to train specialized translators for today's employers, but translation specialists for today, for tomorrow and potentially for the next 40 years.

Therefore, universities cannot afford to base their translation curricula solely on the immediate needs of a fickle labor market; there are certain fundamental translation skills that will never change, including research, critical text analysis, language transfer and cultural intelligence. Translation curricula should also empower future translators to become agents of change in the translation industry, for the benefit of translation as a profession.

Universities and large corporations are now using interdisciplinary approaches to achieve efficiencies and promote innovation, and when translation students are given the tools to become active participants in creative or executive processes, they can improve industry standards and practices. Translators are, after all, the true translation specialists, and they should be given the opportunity to share their expertise, just like translator trainers are specialists in their own fields and should be the ones designing translation curricula, in the industry's best interests. ■

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IF NOT ME, WHO?*
Encouraging critical and ethical praxis in technical communication

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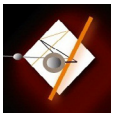
Keywords. Communities of practice, Ethics, Technical communication.

Two decades beyond the digital revolution, the age of the technical communicator has arrived, and yet his status and agency remain tied to an era past. One needs only to look at the terms with which we still describe the technical communicator—scribe, wordsmith, translator—to see the limits of his agency. Such labels imply the technical communicator or professional writer simply writes what he is told to write, reinforcing industrial power dynamics. Indeed, scholars Slack, Miller, & Doak (1993) argue that it is precisely this identification with corporatism that limits the technical communicator's role.

But far from limited, the 21st century technical communicator's responsibilities continue to expand. In the course of a single project, the technical communicator will play the roles of information devel-



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oper, communicator, interpreter, and usability expert. At each stage, the technical communicator dialogues with an audience, developing an Aristotelian *ethos* to build credibility, maintain loyalty, and uphold the public good.

However, communiqués regarding ethical concerns are often perceived as *secondary* to the product under development, despite numerous examples of the catastrophic consequences of minimizing ethical criticality (Walker, 2004). Such disasters are compelling arguments for a renegotiated role of technical communicator as someone who is *in* the institution but not *of* it.

The ever-increasing complexity and pace of production only adds weight to the argument that the technical communicator of today must be technically competent, ethically bound, critically conscious and situated with enough institutional power to halt the wheels of production when necessary, putting the common good over institutional gain. The 21st century technical communicator must be elevated from mere scribe to negotiator.

Sullivan and Porter suggest this is not outside our reach. Certainly, we can teach students and empower professionals to see the multiple aspects of technical communication as an act of "mutual negotiation" (Sullivan & Porter, 1993). As an arbiter between the organization and the public, the redefined technical communicator as negotiator has as her aim "mutual understanding and more ethical choices" (Sullivan & Porter, 1993). Under this new model, the technical communicator would employ a critical-ethical lens to investigate and speak to the multiple discourse communities surrounding the work.

The technical communicator cannot remain the translator of the past, but should evolve into part producer, part advocate, representing the interests of *both* the company and the public it serves. Technical communicators must not abuse their persuasive talents. She must not forget that *people* are affected by what our documents pre- and proscribe. The shutter disaster, Three-Mile Island, the recent BP Gulf Horizon oil spill all remind the technical communicator that it is not uncommon for life to depend on what looks like mere letters on a page (Wilson, 2001). That is why it is important to use language with precision, to prefer simple direct expression of ideas, to satisfy the audience's need for complete and honestly represented information, and to promote a professional climate where ethical judgments can be exercised without reprisal. Understanding the ethics of his position and having the authority to act on ethical dilemmas is critical to the 21st century technical communicator's credibility and the profession's identity and legitimacy. ■

Notes

* As quoted by Andrei Sakharov, Soviet nuclear physicist, dissident, and human rights activist, who won the Nobel Peace Prize in 1975.

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INTERNATIONAL SERVICE-LEARNING PARTNERSHIPS

Engaging professional communication students in a global future

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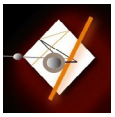
Keywords. International service learning, Community partners, Cross-functional teams, Interdisciplinary collaboration, Professional communication.

Educators have consistently identified service learning as an effective means of engaging professional communication students in the communities where they live and work. Sapp and Crabtree (2002) argue that, by integrating problem solving, critical thinking, and reflection into course work, service learning helps students integrate "theory and practice, the academy and the community, and inquiry and social action" (p. 412). When students write for or with community partners in service-learning projects, the process develops "students' professional, intellectual, and civic engagement" (Turnley, 2007, p. 104). With



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students entering a global economy, however, they also need to become practitioners in and citizens of a wider community, thus the need to integrate international service learning in professional communication curricula.

Ideally, professional communication students would engage with service-learning partners on site, immersed in the community and participating directly in cross-cultural communication and complex problem solving. Although I find numerous *virtual* international service-learning examples in professional communication literature (see literature review of "Virtual service learning: Negotiating boundaries," this issue), my survey of the professional communication literature identifies no current publications about on-site international professional communication projects.

In contrast, literature in technical and scientific disciplines reveals a substantial number of on-site international service-learning projects. In one example, Katterheinrich and Polito (2006) describe a well-drilling project in Kenya—a partnership with student members of Valparaiso University's chapter of Engineers Without Borders. In another example, Riner and Becklenberg (2001) describe an environmental health care collaboration between a Nicaraguan Sister City Organization and a US delegation of Indiana University nursing and optometry students and professional and lay health workers. Although neither of the projects includes students from the humanities, these campus collaborations with international humanitarian organizations suggest possible on-site partnerships for professional communication students, whose design and writing skills would extend an existing

project's capacity and enhance its reach, influence, and levels of community engagement.

Some engineering projects, however, do include non-engineering students, further demonstrating potential roles for professional communication students and their rhetorical, writing, design, and problem-solving skills. In one such partnership, Valparaiso University engineering professor Polito (2005) describes an irrigation project in Kenya designed by the university's student chapter of Engineers Without Borders. In this project, Polito notes that the non-engineering—humanities—students brought unique problem-solving skills, increased the entire group's awareness of the social impact of the irrigation project, and "instigated several very valuable discussions among the group about the nature and impact of the work being done" (p. 10). Polito's (2005) experience suggests that professional writing students could further enhance the project by developing maintenance and training materials—appropriately adapted to the languages, literacies, and resources of the community partners—and by creating written and digital reports about these international projects for future funding or marketing purposes.

In another example, Florman, Just, Naka, Peterson, and Seaba (2009) provide a model of an interdisciplinary team of Xicotepec residents—east-central Mexico—, University of Iowa students—engineering, pharmacy, and humanities—, and local Rotary International members, who collaborated to identify and address community needs, including potable water, classroom space, and healthcare. Two groups of students, the Water Team and Pharmacy Team, prepared in advance

to complete specific projects that had been pre-determined by Rotary members in Iowa and community leaders in Mexico (pp. 77–79). The third group, the Write Team—journalism, women's studies, management, and psychology students—, was not linked in advance to a specific community project, but rather developed its own service-learning projects on site by "forging partnerships with community partners" (p. 81). The Write Team completed written products that are fundamental elements of cross-functional professional communication service-learning projects: a proposal for a retirement home, posters and brochures for a women's health clinic, and articles for a regional newspaper (p. 80).

Each of these projects demonstrates how a small professional communication program could collaborate with larger campus and community entities to accomplish meaningful and productive international partnerships. Beyond reminding us about campus and community organizations already engaged internationally, these examples further identify how professional communication students are especially well-suited to actively integrate writing into an engineering task or health service.

Professional communication students improve service learning by extending a program's capacity with complementary resources. Professional communication students enhance global partnerships through their diverse problem-solving skills and their ability to work with subject matter experts in cross-functional teams, but also by moving the group's focus beyond the task itself—well drilling, health screenings—to increase participants' political, social, and cultural sensitivity.

At stake is the opportunity to engage professional communication students in critical community issues, allowing them to see firsthand the full impact of their service and, paraphrasing Katterheinrich and Polito (2006), to see professional communication as more than just a job, but also as a means of serving a global future. ■

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GENRE ANALYSIS AS A METHOD FOR IMPROVING INTERCULTURAL COMMUNICATION

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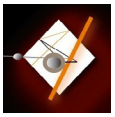
Keywords. Intercultural communication, Call centers, Genre analysis.

New media technologies have profoundly changed people's everyday lives. In particular, new media has created many more intercultural exchanges. Children chat in online gaming rooms with peers from different continents. Consumers receive both solicitations and assistance from workers half way around the world. And businesses routinely conduct synchronous meetings with employees in multiple countries.

These varied intercultural exchanges are not informed by aggregate cultural dimensions—such as the high-context/low-context designations of Hall (1976), or cultural dimensions such as power distance, collectivist/individualist, short-term/long-term, as described by Hofstede (2005)—that technical communicators relied on in the past



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(Thatcher, 2001; Hunsinger, 2006; Sun, 2004). If one member of a one-on-one exchange is not typical of his or her culture, the intercultural exchange can be frustrating. For example, if someone from a low-context culture such as the United States anticipates communicating with someone from a high-context culture such as Japan, she might structure her communication in a high-context fashion. However, Americans from the south tend to communicate in high-context ways already. And Japanese business people who have spent time working with Americans often adopt more American communication habits. If a southern American attempted to communicate in higher-context manner than she already employed, the Japanese communicator might be confused or even offended by what he perceived as condescension.

Since more people from cultures around the world participate in these one-to-one intercultural exchanges, more people are likely to deviate from the cultural dimensions typical for their culture, causing difficult intercultural exchanges. In the past, companies relied on experienced professionals to communicate with representatives from foreign companies. These professionals were successful because they exhibited the cultural qualities that the company's culture valued, so the aggregate dimensions of culture identified by Hall, Hofstede, and others were typical for successful professionals likely to represent a large company doing business abroad.

However, new technologies have made it possible and likely for virtually anyone from any culture to communicate with someone from another culture. These communicators may not act as such cultural descriptions might predict, as Sun (2004) discovered in her work in which

young Chinese women did not seek information as Hofstede's model would have predicted. Furthermore, consumers of technical information are more likely to seek information, not from localized documentation, but via these intercultural exchanges via intercultural call centers and message boards. To adequately serve consumers in this new environment, technical communicators must seek new methods to improve these intercultural exchanges (Thatcher, 2001).

One solution for typical professional intercultural exchanges may be genre analysis (Luzon, 2005), particularly as defined by Bhatia (2004) as situated linguistic behavior. Halliday (1978) identified genre as a culturally dependent mode of communication. Miller recognized that "genre embodies an aspect of cultural rationality" (1984, p. 165), while Martin wrote that genre embraces "the linguistically realized activity types which comprise so much of our culture" (1985, p. 250).

These new technology-enabled intercultural exchanges create new discourse communities with converging communicative purposes—as explained by Bhatia (1993) and Swales (1990)—within emerging contingent cultures that can be studied and exploited. Genre analysis works to inform these communications, not because it accesses and reconciles the cultural differences between participants in an intercultural exchange, but rather because it recognizes that these globalized, intercultural meeting places represent new sites of cultural development for intercultural discourse communities. These new sites of cultural development create new generic expectations for participants.

Because people in a particular rhetorical situation with similar information needs have more in common with each other than people

from the same country in different rhetorical situations, researchers can and should improve these communications by examining the genre closely. For example, Forey and Lockwood (2007) successfully examined a Philipino call center serving Australian customers using such a method.

Through genre analysis, researchers can identify and even shape the expectations for these emerging genres. For example, an analysis of an Indian call center queue serving American customers would reveal that the customer's need to repair his or her computer and to understand where they were in the repair process transcends larger cultural values that inform communication in other rhetorical situations. Additionally, some call center workers effectively manipulate the genre to meet the expectations of customers, while others fail, not because they do not understand the values or communication strategies of their American customers, but rather because they do not understand the genre. These types of analyses are successful, but too few considering that thousands of such intercultural exchanges occur daily with limited success.

The field should identify these common intercultural exchanges so that researchers can use genre analysis to improve them. Ultimately an examination of typical intercultural genres, while certainly more laborious and time consuming than looking up a particular culture on a chart, will improve communication within these new discourse communities in these emerging globalized sites of communication. ■

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COMMUNICATING CONTEXT

Libraries, archives, and museums in a connected world

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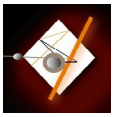
Keywords. Cultural heritage, Contextualization, Linking, Information, Users.

In today's networked digital world, humans and machines coexist as nodes in an ever fluid and evolving web of communication that is hyperconnected, shared, multilayered, concurrent, and multidirectional (Benkler, 2006; Shirky, 2010; Pesce, 2011). Traditionally, memory institutions, such as libraries, archives, and museums—concisely, LAM—have communicated the "official" view of history, privileging some stories, while marginalizing others (Schwartz & Cook, 2002). Social history and postmodernism have challenged this, calling for the inclusion of diverse voices (Cook, 2001; Ketelaar, 2001; Evans, 2007; Jimerson, 2007).

Today, communication signifies the flow of information among humans and machines. Only humans, though, can incre-



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mentally and cumulatively contextualize the information they receive, transmit, store, or interpret at each step of the communication continuum in LAM—making it human, humanizing, and humanly relevant in the process.

Surely, metadata are also attached to records sent over by and among machines, but this is done in institutional settings, behind silos that most often do not converge, nor are interoperable (Zorich, Waibel, & Erway, 2008; Berners-Lee, 2010). Although information systems can transmit or manipulate vast amounts of data in lightning speed, without human interference these are untamed bytes that flow somewhere in the universe of networks. Only people, in fact communities (Bastian 2003), can discern connections and links that exist among disparate records that are often geographically dispersed, and in diverse formats.

In LAM settings, "communication" as a term should not merely be understood as increased access and dissemination through digitization. Such activities are today ubiquitous, and users have come to expect them. Instead, memory institutions should enhance communication of context through people, by facilitating the bridging of knowledge gaps through the creation of meaningful pathways (Dervin, 1998).

A knowledge gap is not simply lack of information. In fact, sometimes there is abundant information resting either in individuals' memories or in whole communities, which rarely gets included in library catalogs or archival finding aids. Linkages from record to record and, in a semantic web context, from data to data, can provide people with new tools for contributing their knowledge and for making sense

of the world. This fundamentally alters the way we *conceptualize*, *interpret*, and *interact* with our cultural heritage.

At the *conceptual* level, new epistemological approaches enhance and further established knowledge. The introduction of digital tools in humanities research, teaching, and publishing has given birth to new disciplinary approaches such as digital history and digital art history. These provide scholars and the public with alternative ways of accessing, researching, and presenting our cultural heritage through projects that offer multiple viewpoints and formats (Cohen, 2004).[1]

At the *interpretive* level, new technological affordances communicate meaning through interlaced, perpetual, multidirectional linkages. Beyond the traditional hyperlinked web, technologies such as linked open data,[2] the backbone of the semantic web, offer exciting opportunities for linking machine-readable heterogeneous data (Bizer, Heath, & Berners-Lee, 2009; Berners-Lee, 2010; Sherratt, 2009). Libraries all over the world release their bibliographic data as linked open data, allowing users to use them freely and repurpose them.[3]

At the *interactive* level, communication is not anymore a succinct, straightforward process, but one that presents a new, polyphonic comprehension of our world, with people taking part in crowdsourcing initiatives that promote greater contextualization of primary sources.[4]

These developments promote an enhanced communication among institutions, people, machines, and data, and create new realities—and expectations—in the cultural heritage sector. Living in a

world of pervasive social media, today's patrons and users have come to expect increased, seamless, and palpable user participation in contextualizing library, museum or archival holdings through contributing content and context (Oomen & Aroyo, 2011; Huvila, 2008).

In a world still defined by national borders, as expressed in policies and systems regulating the flow of information, archivists, librarians, and museum professionals' new role is to promote the unimpeded and unrestricted communication of knowledge globally. ■

Notes

[1] Some examples of such projects are: The Proceedings of Old Bailey (http://www.oldbaileyonline.org) contains a fully searchable edition of 197,745 criminal trials held at London's central criminal court, mashing them up with a 1746 map of London, survey, parish, plague, taxation, and archaeological records (http://www.oldbaileyonline.org/static/Project.jsp).

The September 11 Digital Archive (http://911digitalarchive.org/) contains "more than 40,000 emails and other electronic communications, more than 40,000 first-hand stories, and more than 15,000 digital images," allowing people to tell their stories, making those stories available to a wide audience, [and] providing historical context (http://911digitalarchive.org/about/index.php).

The Digital Sculpture Project (http://www.digitalsculpture.org/) uses 3D digital technologies to capture and present sculpture.

[2] "Linked Data," http://linkeddata.org/home; http://www.w3.org/wiki/LinkedData; http://www.w3.org/2005/Incubator/lld/

[3] Some examples: CERN library (http://thedatahub.org/dataset/cern-library-bibliographic-data); Libris, the joint catalogue of Swedish academic and research libraries (http://libris.kb.se/); German National Library (DNB) (http://www.dnb.de/EN/Service/DigitaleDienste/LinkedData/linkeddata_node.html); the Library of Congress (http://id.loc.gov/about/); Europeana (http://pro.europeana.eu/linked-open-data).

[4] Some examples are: the Australian Newspaper initiative by the National Library of Australia (http://trove.nla.gov.au/ndp/del/home) where users can correct the OCR'ed text of digitized Australian newspapers; the Old Weather project (http://www.oldweather.org) where users transcribe weather data from historical ship logs; or the New York Public Library's Map Rectifier project (http://maps.nypl.org/warper) where users can use the NYPL Map Warper tool for "digitally aligning ("rectifying") historical maps from the NYPL's collections to match today's precise maps."

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INTERCULTURAL PROFESSIONAL COMMUNICATION IN SYNCRETIC ENCLAVES

An overview of failed corporate public discourse in Malaysia

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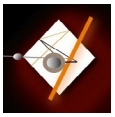
Keywords. Syncretism, Technocracy, Corporate public discourse, Intercultural/international technical communication, *Kampong*s.

Communities of Malaysia's rural/urban *kampong*s (villages) may respond angrily when corporate public discourse favors technocratic knowledges over syncretic values. Regarding technocracy, Feenberg's "revised technocracy thesis" established that technological systems are not really autonomous above all human populations. Instead, powerful groups benefit when technologies subjugate others (1994, p. 94). And Goh (2009) perceived syncretism—the integration and transformation of symbols into local meanings—in Malaysia's lower- and middle-class ethnic Chinese (pp. 110–114).



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Seeing conflict between technocracy and syncretism, I begin this position paper with a personal story of Singapore's syncretic high-rise, public-housing culture—a transformation of earlier *kampong* cultures. Contrasting this syncretic, though technocratically changed, culture with Malaysia's rural and urban *kampong*s, I position Australia's Lynas Corporation—especially its public discourse on a rare earths processing site in Malaysia—within a history of corporate professional communication failures harmful to Malaysia's *kampong*s.

Hungry Ghost Month, Singapore, 1999. Burnt paper fragments drifted in through our third-floor window. Home to my predominantly Malaysian Chinese family, the building housed many Singaporeans. Discounting my presence as a Westerner, I considered the place "real Singapore," distinct from areas where Westerners lived. Real Singapore? Recalling Singapore's 1960s public housing campaign, Loh (2009) recounted a population shift from rural and urban *kampong*s and shop houses to government-regulated high-rises (pp. 139–140). In time, the link between physical *kampong*s and everyday life was broken, but syncretic practices survived around communal ground floors, or "void decks," of the public-housing high-rises. It was joss paper remnants that had floated into our flat from burning joss paper bins near the void deck.

In Malaysia, many rural and urban *kampongs* and shop houses remain, but these syncretic cultures get pushed aside increasingly by planned development spaces of various scale. Ong described these "subregional economic zones," including the expansive Singapore–Johore–Riau Growth Triangle, or Sijori of Indonesia–Malaysia–Sin-

gapore (2006, pp. 88–89). Near Kuantan, Malaysia, through much of 2012, Lynas Advanced Materials Plant (LAMP) awaited government approval, even as a proposed Malaysia–China Kuantan Industrial Park promises industries—according to one government officer—in plastics, electronics, and clean energies.

Belying geopolitics, the proximity of the planned industrial complexes inside the larger East Coast Economic Region (ECER), which includes Kuantan, led that same spokesperson, ECER Chief Executive Officer, Datuk Jebasingam Issace John, to exclaim "'Lynas is a good idea, a good project. We don't want to have a negative impression of it right from the beginning'" (Ahmad & Razali, 2012, para. 1,5). In fact, LAMP would supply near "a fifth of the world's demand" for rare earths used in nanotechnologies, automotive parts, weapons systems, and green energy technologies, all pulling currently from China's rare earths at 95–97% of global consumption (Rare earths, 2012, para. 2, 4).

Quite recently—in November 2012, in fact—the site began processing rare earths—a few months after Malaysian authorities granted Lynas a temporary operating license. Yet this work proceeded in light of a formal protest, a legal appeal community members near the site made to Malaysia's Court of Appeal. Though they sought to block the temporary operating license at least until a court date in early February 2013, the group was unsuccessful. On 19 December 2012, the Court of Appeal rejected the legal challenge, thus allowing Lynas to continue processing rare earths in the meantime (Agence France Presse English Wire, Dec. 19, 2012, para. 1-5). Also in December, Malaysian

government representatives reminded Lynas publicly that validity of the temporary operating license hinged on the company removing all leftover substances, whether saleable or not, from rare earths processing in the country (Agence France Presse English Wire, Dec. 11, 2012, para. 1-6).

Indeed, *kampong* communities have remained concerned that Lynas would store thorium—a low-level radioactive byproduct of rare earths processing—in Malaysia. Australian law prohibits importing the material to Australia, even when derived, as would be the case, from raw material mined in Australia (Lynas Ahead, 2012, para. 5; Tanquintic-Misa, 2012, para. 2–4). Significantly, Malaysian opposition member and Penang chief minister, Lim Guan Eng, rejected the offer of Lynas' Executive Chairman, Nicholas Curtis, to meet in Australia. Claiming Curtis should meet Malaysian communities instead, he quipped "Being from Australia, you will indeed appreciate that the process of public consultation is part and parcel of a democracy" (Sta Maria, 2012, para. 12).

Quite problematically, Lynas' public discourse privileges technocracy, ignoring syncretic values such as comprehensive consultation. A brief overview of Lynas' website and related online media reveals Lynas' approach. "Enhancing Environmental Protection," "Enabling Digital Technology," "Improving Energy Efficiency," and "About Lynas" convey the company's claim that its "goal is Zero Harm" (Lynas Corporation, 2006a, 2006b). Likewise, Lynas' YouTube clips tout rare earths for "energy efficiency," "environmental protection," and "digitization" (Lynas Malaysia, 2011, May 11), refuting parallels between

LAMP and a rare earths processing debacle two decades ago at Bukit Merah, Malaysia:

> We're not there to damage the children of Malaysia, as some people are trying to claim. We're there to give opportunity to the children of Malaysia and Kuantan. . . . We are safe. We are not to be compared to Bukit Merah. (Lynas Malaysia, 2011, May 11).

However, independent media report concerns about rare earths processing. Despite Curtis' insistence that Lynas would control thorium through "extremely safe, well-tried industrial processes that are used in European, American, German, Japanese industry," Al Jazeera's *101 East* correspondent cited incidents of leukemia, still births, and severe mental disabilities at Bukit Merah (101 East, 2011). Though Mitsubishi Chemical denied responsibility for these health problems, it closed the plant in 1992, spent US$100 million for clean-up, and donated US$164,000 to area schools (Bradsheer, 2011). Counting on public comparisons of LAMP to Bukit Merah, YouTube channels Kampong Radioaktif ("Radioactive Kampong") and Save Malaysia, Stop Lynas! value community voices over Lynas' business and scientific experts.

Like Lynas, Malaysia's government privileges technocracy. My recent search-term query for "Lynas" on bernama.com, the Malaysian government's official news website, resulted in this sampling of headlines:

1. "Discuss Lynas based on facts, says rare earth expert,"
2. "Malaysia has adequate laws to ensure Lynas' activities not dangerous – expert,"

3. "Lynas issue must be handled in a scientific manner – Psc,"
4. "Continued engagement with the public necessary, say rare earth experts,"
5. "Rare earth experts impressed with Lynas facility."

Ultimately, Lynas' public discourse repeats failed strategies of multinational corporations linked to earlier "spirit possession" cases in Malaysia (Ackerman & Lee, 1981; Ong, 1987, 1988; McLellan, 1991). Specifically, Ong faulted Malaysia's government and transnational corporations for framing Malay female workers' "spirit possession" protests in highly gendered mental health rhetoric (e.g., "mass hysteria"). Because the pre-Islamic underpinnings of Malay *kampong*s see "spirit possession" as beyond a woman's power to resist, society cannot therefore punish rural factory women who have taken that culturally sanctioned path to protest male-dominated, institutional control at transnational factories (1987, pp. 86, 139–221; 1988, pp. 28–40).

Whether "spirit possession" or community anger against Lynas' public discourse, syncretic protests should lead professional communicators to question how our practices impact communities in intercultural contexts. ■

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BIRDS OF A FEATHER

Translation and communication studies in Europe

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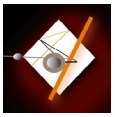
PETRA research group

Keywords. Translators, Training, Language learning, Skills, Communication.

Translators are professional communicators. If you add foreign languages to the professional profiles of technical writers, business communicators, journalists, copywriters, proofreaders, revisers and editors, sometimes you might even be unable to tell the difference. However, if you were asked to tell these jobs apart by looking at the way they tend to be articulated in universities in several European countries (e.g., Spain, France, the UK) you might easily conclude that translators actually belong to a very different kind of business.

Most people pursuing university training as professional communicators often enroll in programs from communication schools



within social science divisions, whereas would-be translators tend to knock at the doors of schools and departments of modern languages, usually within the humanities (Pym, 2009).

One of the obvious reasons for this is that translation trainees usually need to improve their language skills; so much that up to 40% of their undergraduate course load may be devoted to language classes; a good additional 40% goes to translation practice itself (ANECA 2004, p. 123). That is why in most Western and Northern European universities, translation programs have remained at hand-reaching distance of the language programs they often grew out of. Many undergraduate communication programs also tend to have a good portion of their syllabi focused on language and communicative skills.

Journalism might be the oldest true communication profile to be trained at universities—the Ecole Supérieure de Journalisme of Paris opened in 1899—and translation programs—the Faculty of Translation and Interpreting (former Ecole de Traduction et d'Interprétation [ETI]) in Geneva opened in 1941—have seen training demands rocket in the last 50 years (e.g., in Spain, 4 programs in 1989; 22 programs in 2012). In fact, they may have paved the way to many other professional communicator profiles that entered higher institutions later on. Ever since David Berlo founded the first general communication arts department at Michigan State, communication studies have been on the rise, although in between the language arts and the social sciences paradigms.

In the last 20 years, Western societies have undergone deep changes which are impacting our daily lives and our future in ways

that we are still trying to discern. Many of these changes have to do with information and communication technologies. Thus, universities are still coming to terms with the nature and specifics of professional communication training, mainly because it cuts across traditional academic classifications (Abbott, 1988, p. 53). That is why, still too often, communication degrees are offered by business schools, computing schools, campus-wide writing programs, native-language and foreign language departments.

In a landscape where some communication subfields still seem to be defining their contents (Mulder, Longnecker, & Davis, 2008), the tendency seems to be to group all professional communication programs together. In the US, this is what happened at University of Pennsylvania's Annenberg School for Communication, Syracuse University's SI Newhouse School of Public Communications and, recently, to the Brian Lamb School of Communication at Purdue. Concentrating subfields is also the aim of smaller units such as the communication departments at the University of Washington and UC Santa Barbara. A similar move from scattered first steps is taking place in Canada (Tate, Osler, Fouts, & Siegel, 2000). But translation and interpreting are usually still out in the cold.

The best way to improve the language and communication skills of professional communicators in general—not only translators and interpreters—might be to develop them in undergraduate programs in applied languages, which would cater for the 40% common curriculum in language skills; this is actually happening in many countries in Europe and abroad. Translation and interpreting programs would then

become graduate only (c.f. Snell-Hornby, 1992) and focus on the 40% of translation practice, which is the idea behind the EU's 60 ECTS European master's in translation. However, I would like to argue that training (novice) professional translators takes longer than one year, and that most of the remaining 20% course load in current undergraduate translation programs (e.g., technical writing, shared computer tools, text design & layout, information search & retrieval, terminology, web design) is also needed, and very close to the training needs of other profiles in professional communication.

In sum, I believe that establishing sounder bridges between all professional communication programs would enhance their flexibility and improve their adequacy to the demands of society (Amit-Kochavi, 1992). This is why I think we should move translation studies to the social sciences, and translation programs to communication schools. ■

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"SMART" CONNECT-EXCHANGE INTERCULTURAL STUDY ABROAD MODELS

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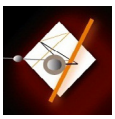
Keywords. Divergence, ePortfolios, Glocalization, Media richness, "Smart" connect-exchange study abroad model.

Real solutions for international problems come from glocal communication approaches; that is, from an understanding of local cultural practice examined through intercultural exchange, through reciprocal teaching and learning, and through global application.

Unfortunately, many obstacles prevent sustainable intercultural exchanges that model and develop such communication skills. For instance, many students cannot afford to study abroad without increasingly rare scholarships, even though study abroad is an effective way to try on another culture's views for size. And traditional models require students and faculty to leave obligations behind for 3–4 months, where much time on location is spent adjusting to cultural differences. The 2–3 week shorter cultural tourism model



has significant limitations for glocal communication skill-building as well.

Instead, "smart" connect-exchange intercultural study abroad models should be explored. We must embrace a philosophy of divergence (Robinson, 2006), of glocal practice, and of focused academic instruction that scaffolds extended intercultural professional relationships. Bhaduri (2008) points out that globalization defines our era and that we must embrace such complexity and change. According to Bhaduri,

> Our aim should be to stimulate new thinking, research and policy work in a domain that remains largely ignored by scholars of education. Millions of youth are growing up in a world where global processes are placing new demands on educational systems that are traditionally averse to change. (Bhaduri, 2008, pp. 15–16)

Further, as Chen and Starosta (2008) write,

> The citizens of the twenty-first century must learn to see through the eyes, hearts, and minds of people from cultures other than their own. . . . In order to live meaningfully and productively in this world, individuals must develop their intercultural communication competence. (Chen & Starosta, 2008, p. 215)

Knowledge-makers today communicate glocally by mashing together culturally diverse and socially complex content.

Indeed, the global economy often values homogenization rather than understanding and divergence (Hahnel, 1999; Levy-Livermore, 1998), emphasizing glocalization as selling a product in abbreviated, more

readily sellable forms, rather than celebrating local culture in full vibrancy (Felton, 2002). While some call for a process of demystifying the global economy (O'Connor, 2002), instead, what is needed is more organized and contextualized complexity, embracing dynamics provided by cultural immersion and media richness. Kock (2005), for instance, suggests that greater understanding comes from communications that are "co-located and synchronous" (p. 119), and ubiquitous mobile tools can approximate such media richness.

To attempt to develop such a model, two new central universities in India, in conjunction with a university in the US, have been collaborating through

- faculty visits and team-teaching;
- better preparing students to negotiate global societies; and
- making stronger connections between the academy, community, and workplace.

The model is flexible, designed to offer multiple cultural excursions and workplace ethnographic opportunities while connecting smaller lesson units between institutions—rather than full courses—in order to emphasize problem-based learning. The model requires a high amount of ongoing interactive participation and divergent thinking through peer-to-peer interaction with mobile devices and live/recorded audio/video lectures, and informal exchanges. In this 4-month model, students from India and the US interact virtually during the first month, continue their work in the US during the second, continue their work in India during the third, and return to their

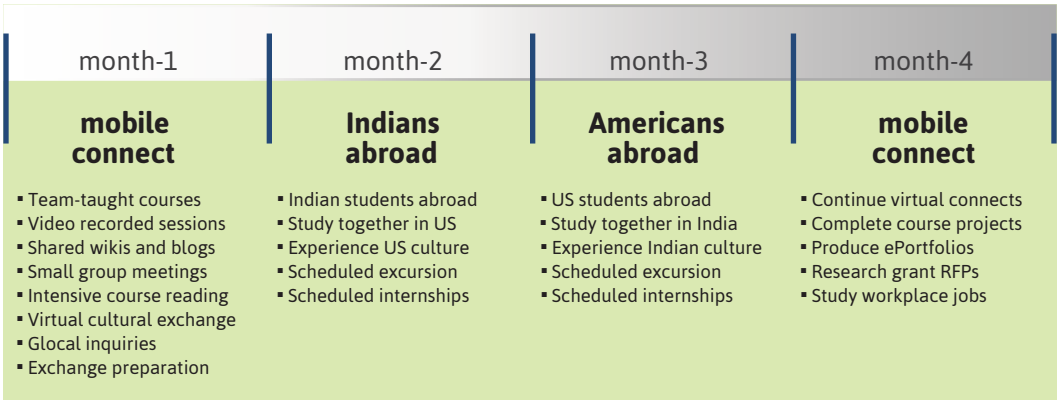
respective countries to finish out the semester during the fourth (see Figure 1).

The use of social media, other virtual communication tools, and ePortfolios for reflection and assessment purposes highlight what is often "lost in translation" between cultures. An ePortfolio is an electronic, selected collection of work that enables students to make cross-cultural, multimodal, and sustainable connections between artifacts and diverse viewpoints. Students can then effectively transfer this more glocally-responsible media rich knowledge to situations beyond the academy.

Students, thus, take a set of courses team-taught by instructors in both universities, courses which encourage multiple cultural perspectives on globally-impacting readings. Smaller modules from a variety of courses can be shared in order to maximize the direction each culture's set of courses need to take. While abroad, students can participate online in other courses they're taking outside of the

Figure 1

The smart connect-exchange study abroad model



exchange program at their home institutions. Teachers, too, who are also teaching courses or fulfilling obligations in other areas can more readily maintain hybrid-delivered courses; obligations at a distance are more manageable if arrangements need only be made for one month, instead of four. Yes, this requires much scheduling and organization. But yes, it is a more authentic, culturally-engaging, and glocally-responsible exchange model.

In order to better resolve international problems through negotiated glocalized thinking, we need smarter models of study abroad, such as the smart connect-exchange model, to better prepare our global citizenry. ■

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TOWARD EXPERIENCE DESIGN

The changing face of technical communication

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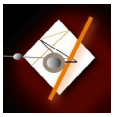
Keywords. Design, Experience, Usability, Emotion, Culture, Engagement.

The changing face of technical communication is no longer centered solely on the principles of document design, audience and task analysis, the specific heuristics in design analysis, and interactions design; rather, attention has shifted to include what makes for good experience. Good experience design demands a widening scope for user engagement and goes beyond the interaction between the system and the user.

Experience design (Aarts & Marzano, 2003) could be better explained by asking questions like: "Has the traditional role of the user and designer changed or merged to a large extent?" "Is design an experience or an outcome?" "Is design for task completion or for engagement?" Design in this era is more about creating a community, relation, feelings, friendship, and collegiality that promotes and maintains a sustained user interaction with the interface. Users will remain interested



in an interface not only because it looks good, but because it keeps the user engaged in continuous exploration, newer applications, a deeper level of personal satisfaction, dynamic feedback, and a sustained dialogue among users of the system.

Recent research (Sun, 2012) on culturally localized user experience (CLUE) and cultural usability could help explain how experience design professionals deal with cultural differences when designing to maintain user engagement. This research provides explicit indications of how identifying culture-specific markers—for page layout, navigation, text and graphics links percentage, search function, display density, underlined links, total amount of items, etc.—for different web application designs, and targeted to a multi-cultural audience could facilitate sustained user engagement and a superior experience.

Cultural models provide enough indication of how culture-dependent interpretation of context, space, and time might influence users' experiences when interacting with an interface or application. Marcus and Gould (2001) have investigated how cultural factors—based on Hofstede's cultural dimensions in considering the usage requirements, preferences, metaphors, appearance, mental models, and navigation of different user web designs—influence and support a higher level of usability, as well as a better understanding of web content. All this research suggests a new set of usability heuristics focusing, not only on audience background, but including usage preferences stemming from multiple cultural conventions.

There is recent research focusing on designing professional communication systems for both experience and emotion. Adding social

cues to a web site has been suggested as a possible strategy to increase consumer trust in online vendors. Research studies have examined the effectiveness of including photographs in an e-bank's web site and found a significant positive effect on perceived trustworthiness of the examined web site (Steinbrück, Schaumburg, Duda, & Krüger, 2002). In the past, research projects discussed how computer-mediated communication systems should be structured systematically to prevent information overload, but structure should be imposed by individuals and user groups according to their needs and abilities, rather than through general software features (Hiltz & Turoff, 1985). We are now talking about "mixed reality teaching & learning environment" (MiRTLE) that enables teachers and students participating in real-time mixed and online classes to interact with avatar representations of each other (Callaghan, Shen, Gardner, Shen, & Wang, 2010).

Research (Cook & Das, 2005) on designing for the human experience in smart environments, emotions evoked by mobile applications (Isomursu, Tahti, Vainamo, & Kuuti, 2007), discovery that visual design aesthetics significantly impact perceived usefulness, ease of use, and enjoyment—all of which ultimately influence users' loyalty towards a mobile service—definitely point to the fact that professional communication is riding the wave generated by experience and emotional design.

Experience with a product often could be interpreted in terms of its emotional appeal and subsequent design. Norman (2003) provides a comprehensive example of how to look at a product by considering behavioral, visceral, and reflective aspects of design. So far, however, little

is known about how users respond emotionally to products and what aspects of design and interaction trigger emotional response (Desmet, Porcelijn, & van Dijk, 2007), although there also is research identifying quantitative relationships between key design factors and dimensions of emotions for developing homepages that target emotions more effectively (Kim, Lee, & Choi, 2003).

New research in applied ergonomics explores users' emotional relationships with products. Such research projects have discussed new user needs analysis techniques like *product personality profiling*, *mood boards*, and *visual product evaluation* toward developing heuristics for emotional design (McDonagh, Bruseberg, & Haslam, 2002). Also, the concept of Kansei Engineering contributes to our understanding of emotional design. New research involves the adoption of Kansei Engineering in web sites as a systematic method to engineer consumers' affective appeal and incorporate them into new formulas for web design (Anitawati, Nor Laila, & Nagamuchi, 2007).

Users' emotional relationships with products or interfaces also could be explained in terms of the shifting locus of control. To promote sustained user engagement, designers now allow readers to create customized products—mugs, t-shirts, calendars, collages etc.—using their own digital photos from a web gallery. Online news portals now give users direct engagement by asking them to post comments on reports or send in photos and videos (e.g., CNN iReport). Facebook or other online channels like Twitter, forums, and Tripadvisor allow users to create instant discussion platforms, provide information, support or challenge ideas and views. Web sites like Lulu and Amazon allow users to

self-publish. Amazon engages users by allowing them to write product reviews. Such ideas and varied applications create different experiences for the product specialists, architects, designers, marketing people and customers, with every idea and approach having a life of its own.

Depending on the application domain, it is quite possible that the traditional role of the technical communicator might be broadened to include a role as an experience designer. Additional heuristics related to designing and measurement of emotion, user engagement, and experience with and without the system, and locus of control should be developed. This new-age technical communicator should remember that the goal is not simply to capture the direct interaction between the system and the user; neither is it to jump right into the design process. It is equally important for any design to schematize and include additional experiences related to the product (e.g., branding, mass media experiences).

Research into cognition and behavior is still important. Everyone still wants to know what and how users and designers think about design. But we have reached out to embrace more than cognition and behavior. Experience design starts with models of holistic experience and with a story—not mock-ups of specific screens. And it still needs the traditional brainstorming techniques, prototyping, writing in sequences, and so forth, in the design process—although with different priorities and terms of use. The traditional usability methods have been updated to include more state-of-the art techniques, and the traditional document design techniques are used in a way to promote engagement and provoke emotional appeal.

We have reached a stage where it is rather abstract and difficult to quantify who contributes to the design and to what extent. There is no one way to an experience because everyone involved has different stakes and viewpoints in the design process. To start with, we need a holistic approach to experience modeling, rather than getting bogged down with interface level details. Experience design introduces a cybernetic approach to the design environment and outcome, where action by the design system causes some change in its environment, and that change is fed to the design system via information—feedback—from any experiencer, enabling the system to change its behavior. ■

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INTEGRATED WRITERS, INTEGRATED WRITING, AND THE INTEGRATION OF DISTRIBUTED WORK

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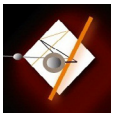
Keywords. Integrated writers, Integrated writing, Integration of distributed work.

In our studies in Europe and the US, we have seen three interrelated trends in professional writing: towards *integrated writers*, *integrated writing*, and the *integration of distributed work*. We believe that these three trends will accelerate and broaden throughout the industrialized world due to developments in knowledge work and digital technologies, as well as corresponding changes in work organization. Yet the third trend has begun developing in different ways in the different contexts of the US and Europe.



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Integrated writers are knowledge workers who own processes and who routinely combine knowledge, methods, and information with their work on those processes. Such integrated writers (e.g., engineers, general managers, accountants, health technologists) do not see themselves as writing professionals, but nevertheless integrate writing with their other tasks across the organization. They often demonstrate deficient problem-solving strategies in their writing (e.g., intensive text planning, but weak revising and a weak addressee orientation; see Jakobs, 2008). In their perception, writing is a less important and unloved part of their work, yet these writing tasks are often vital (Jakobs, 2005), especially as work becomes increasingly textualized (Jakobs, 2008).

As organizations continue to combine production and documentation chains, they will require integrated writers who can combine knowledge, methods, and information with their work on the processes they oversee. This trend seems to be proceeding in both European and US contexts.

In *integrated writing*, products are customized for specific customers through textual information to create specific value for that customer (Castells, 2003). For instance, in one study (Spinuzzi, 2010), workers integrated professional and private networks—even reaching out to friends and relatives with special expertise—to provide deeply customized products for specific clients. As workplaces become more networked and internal work becomes more accessible by external actors—customers, clients, contractors—, writing will become more integrated, involving more boundary-crossing, more interplay among activities, and more cross-functional teamwork.

Writers must also manage their integrated writing across distributed texts. This entails automating parts of writing, integrating streams of information to quickly generate and manage documentation and other forms of textual knowledge (Mirel, 1996; Pullman & Gu, 2008), then assembling, recombining, and customizing elements (Swarts, 2009). Again, we see strong evidence of this trend in both US and European contexts.

Finally, the *integration of distributed work* involves tying together distributed, disparate people and systems so that information can flow through and bring value to different contexts. This integration involves mapping genre systems across contexts. Just as software developers create applications programming interfaces (APIs) to allow different programs to interoperate seamlessly, people and products can establish common protocols for sharing and integrating information (see Spinuzzi, 2008, Ch.7).

The integration of distributed work is currently quite undeveloped, and promises to be a difficult problem that spans several domains. Intriguingly, we have seen indications that it will develop somewhat differently, given the different contexts in the US and Europe. For instance, Europe's population growth is well below the US', leading to the "greying" of the population and thus more need for public sector efforts such as tightly bundled, coordinated emergency services (Beul, Mennicken, Ziefle, Jakobs, Wielpütz, Skorning, & Rossaint, 2010) and ambient assisted living services. In the US, such services are less urgent focuses, but we see many temporary services developing (Castells, 2003), especially services that pull together comparatively small providers in the private

sector (Zuboff & Maxmin, 2004). As this trend develops, we expect to see it further adapt to each context as well as other international contexts. ■

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FINDING FRICTION POINTS

Rethinking the flat earth model of globalization

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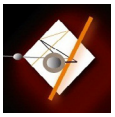
Keywords. Globalization, Information communication technologies (ICTs), Culture, Genres.

Today, we are continually reminded how information communication technologies (ICTs) level barriers of time and distance to open a newer, flatter geography of global communication. It is the globalization era in which colleagues in different nations can collaborate—in real time—on projects. But as ICTs flatten barriers of physical space, other obstacles have emerged.

These new barriers require individuals to reconsider the flat earth paradigm as one that does not represent a uniformly smooth landscape. Rather, the surface of the modern globe is covered by *friction points*—areas where something can slow or stop the flow of information (St.Amant & Rife, 2010). International organizations thus need to know where friction points occur to avoid them and get information from point to point as quickly and easily as possible. And, in



an economy where rapid information exchange is essential to success, failure to identify and address such friction points can be costly or even damaging (Sakthivel, 2007; Ang & Inkpen, 2008).

Within this context, technical communicators become central figures, for they are at the heart of an organization's information collection, organization, and distribution procedures. Thus, the more technical communicators know about friction points, the more they can contribute value to an organization and secure their positions in these difficult economic times (Giammona, 2004). The key challenge for the technical communicator then becomes identifying friction points affecting international information exchange. Interestingly, these friction points are not random. Rather, they often reflect the physical, cultural, or political settings in which individuals use ICTs (St.Amant & Rife, 2010). All friction points, however, affect the success with which technical communicators can participate in today's global marketplace.

Members of the field therefore need to be aware of the following general friction points affecting global interactions:

- **Hardware design.** Hardware (e.g., computers, servers, or routers) is essential to accessing the online environment and participating in the global economy. Most hardware, however, is developed for certain contexts (e.g., climate-controlled offices) and can be difficult to use in other settings (e.g., non-air-conditioned rooms in a desert climate). In such situations, individuals must often adapt technologies designed for one context to the operating conditions of another (van Reijswoud & de Jager, 2011). Additionally, different technol-

ogy usage patterns and service payment plans can affect how individuals use hardware, like mobile devices, to access the Internet (Kaplan, 2006). These factors all affect how different groups use online media to access and share information globally.

- **Software compatibility.** Software programs are essential to many tasks driving the global information economy. Not all organizations, however, use the same software. Moreover, certain softwares (e.g., proprietary software) can be prohibitively expensive—particularly in emerging economies (St. Amant & Cunningham, 2009). While affordable options (e.g., open-source software) exist, they can be incompatible with the programs used by overseas colleagues or clients and can limit technology-based interactions (St.Amant & Ballentine, 2011).
- **Cultural uses.** Not all cultures use a technology in the same way. Social networking software (e.g., LinkedIn or Facebook), for example, is available in many nations, but cultural groups seem to share different kinds of information—and permit different degrees of access to information—when using such technologies (Fogg & Iizawa, 2008; Guo & Yu, 2009). For technical communicators, these differences become friction points affecting how they use such technologies to share information internationally.

- **Genre expectations.** Genres are often central to effective information exchanges, yet cultures can have varying expectations of how to use certain genres and how to present information within a genre (Woolever, 2001). These expectations, moreover, exist apart from media. So, just because one can email a research report to overseas colleagues does not mean those colleagues will view the genre of the report—or the approach used to present information in that report—as effective or credible. While international plain language and corporate reporting initiatives are creating mechanisms for addressing such issues, increased efforts are needed to examine the range of genres associated with professional discourse and information exchange in the global economy (Santema, Hoekert, van de Rijt, & van Oijen, 2005; Godwin, 2009).
- **Legal issues.** The rules stipulating how to treat data can vary from nation to nation (St.Amant, 2008). Such differences involve what is classified as "private" or "sensitive" information, and how that information can be used by whom. They can also involve various perspectives of ownership that govern when copyrighted materials or proprietary data can be replicated, modified, or shared (Constable, Kritikos, & Bayliss, 2011). As technical communicators routinely gather and exchange information for their jobs, such distinctions can create problematic friction in global contexts.

Identifying friction points thus becomes essential to effective participation in the global economy.

To examine such issues, technical communicators can use focused questioning in three general areas—computing, culture, and courts—(the *3Cs categories*) to research prospective sources of friction in global interactions:

1. **Computing**
    - What hardware and software are used to access and exchange information?
    - What design, infrastructure, or economic factors might affect uses of hardwares and softwares to communicate?
2. **Culture**
    - Which technologies are used to exchange information? What kinds of information are shared—and with whom—via each technology?
    - What genres are used to share information? What is the objective of each of these genres, and what kinds of information must be provided to achieve these objectives?
3. **Courts**
    - How are "ownership" and "proprietary information" defined? What legal guidelines govern how materials and information can be replicated, adapted, or shared?
    - How are "privacy" and "sensitive information" defined? What guidelines govern when such information can be shared and how it can be used?

These 3Cs categories/questions allow technical communicators to identify and understand friction points when working in international contexts.

Globalization has flattened many barriers to international interactions. In so doing, it has allowed new issues to come to the forefront. These items create friction points that affect the flow of information across a supposedly flattened earth. By identifying and addressing friction points, technical communicators can enhance communication practices in the modern economy. ■

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ON *AVATAR*
Digital commerce as activist pedagogy?

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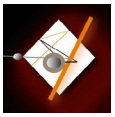
Keywords. Internet, Environmental movements, Film, Travel.

Contemporary media allow digital environments to function as transnational classrooms, a multidimensional public sphere accessible to people with Internet connection. This generates ethical dilemmas, including the right to represent groups with incomplete civic rights and restricted access to representational centers. James Cameron's *Avatar* (2009)–Amazon Watch–International Rivers (Amazon Watch, n.d.) marriage responds to this phenomenon through uses of digital communication as both profitable enterprise and activist means.

The film narrated the interplanetary corporate destruction of another moon's—Pandora—ecosystem and civilization for its natural resources. But in search of interesting locales to photograph, *Avatar*'s computer generating image professionals stumbled upon the tribes of the Amazonian rainforest whose culture and livelihood face extinction due to a government-backed multibillion project to build the Belo



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Monte hydroelectric dam in Xingu River. Director Cameron, producer Jon Landau, and the crew joined forces with anthropologists, tribesmen, regional, and (trans)national activists to cancel these plans. Today, *Avatar*'s digital contribution to the movement combines commercial and activist enterprise, assisting at once in global circulations of the cause and the promotion of Cameron's industry merchandise.

The generation of videos for the dissemination of *Avatar*-led activism against Belo Monte appears to draw upon *Avatar*'s core narrative that questions human progress building upon destruction. Cameron himself appears in one of these open-access videos—promotional of his relevant documentary—confessing that he always wanted to travel to Brazil's virgin territories (A Message from Pandora, n.d.). Elsewhere, he is depicted amongst indigenous populations like *Avatar*'s soldier Jake or an ethnographic traveller-investigator, uncovering evidence of coordinated crimes against localities. *Avatar* actor Sigourney Weaver's video adopts a humanitarian style (Amazon Watch, 2011), prompting viewers to sympathize with the cause. Her previous cinematic roles—*Alien*'s (1979, 1986, 1992, 1997) Ellen Ripley hired by a corrupt corporation she ends up fighting against—allow connections with global feminist activism within academia and in popular culture.

Together, Cameron and Weaver question the ethics of activism geared towards development. Does privileged professional intervention limit or enhance indigenous action (Hobart, 1993)? Can we speak of corporate humanism that "educates"? Or do such broadcast initiatives reproduce the ideologies of the developed World? Indeed, some claimed that the film itself projects a patronizing, even racist attitude

against fictional indigeneity and, by extension, its real-life analogues, figuring mostly as a "duty" to save the dispossessed from suffering (Newitz, 2009). The Amazonian tribes in question are one skin color darker than privileged metropolitan Brazilians and several colors darker than their Western benefactors.

The *Avatar* project sustains disseminations of ideals, ideas, and action that often contradict each other (Appadurai, 1990; Urry, 2007). The "thanks" extended to Cameron by indigenous tribes clashed with film critiques as a racist fantasy, and even the indignation of businessmen in the Amazonian city of Alta Mira, who suspect that the motivations of media business—profit, more prestige—go deeper than we might think (Hirsch, 2011).

Social science scholars might consider how digital activism effectively reproduces paradoxes of knowledge as a positional good: Western technology always appears to control communication tools, "inviting" indigenous cultures to partake in global audiovisual enterprise. A devil's advocate would stress, instead, that local activists actually gained from the involvement of Hollywood celebrities fronting the protest photos that populate today's Flickr collections (Amazon Watch, 2010). In addition, the movie—popular with diverse audiences—served as an introductory narrative to the activist project for audiences with little knowledge of environmental and human rights politics. Both arguments are plausible.

One thing is sure: Cameron's digital lens merges fabulist creativity with political commitment in an ethical plight worthy of further investigation. ■

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THE ROLE OF NEGOTIATION IN INTERCULTURAL BUSINESS COMMUNICATION

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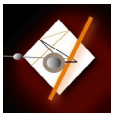
Keywords. Negotiated culture, Self reference criterion (SRC), Role of cultural values in intercultural communication, Cultural priorities.

Intercultural business communication is a comparatively new field. Its founders, E. T. Hall (1959), Hofstede (1980), and Trompenaars (1994), among others, established a framework for approaching different cultures, and developed concepts such as high and low context cultures, individualism versus collectivism, uncertainty avoidance, ascription versus achievement. Originally, one of the goals was to help western—mostly American—businesses to understand other cultures so that they could be successful in different environments. What do we need to know about other cultures in order to communicate effectively? To what extent do we have to adapt to their practices? Comparative studies were an outcome of this phase (Lerner & Malach-Pines, 2011; Matveev & Nelson, 2004; Tipton, 2009).



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With the expansion of international trade, the field has exploded over the last 20 years. As a result, researchers have taken a more critical view of the theoretical underpinnings of intercultural business communication. In particular, critics are now arguing that intercultural communication has focused almost exclusively on western value systems when examining other cultures (Lowe, 2001). As Thatcher (2001) points out, cultural studies frequently are based on monocultural and monolinguistic methodologies, thereby limiting the validity of the findings (Stewart & Bennett, 1991). In the guise of research, western managerial practices and Western agendas are advanced and may even result in a new form of colonialism (Ailon, 2008; Őzkazanç-Pan, 2008; Wong, 2010).

As other countries have expanded their global trade, they have also been looking at the world from their viewpoint. The Japanese, for example, want to know how Danish business practices and communication patterns differ from their own and what they need to do to be successful in Denmark (Clausen, 2007). Chinese researchers are examining the influence of Confucian value systems on managerial practices, and how those values influence their international business dealings (Tan & Chee, 2005).

In this approach, the players from other cultures are looking at the world through their self-reference criteria (SRC), similarly to western researchers. The problem is that the SRC easily shuts out the other side's views. For example, in American culture, individualism, directness, and achievement orientation are positive values. Americans, therefore, will look for those values in foreign managers and employees

to evaluate their contributions. This approach neglects that, in Asian cultures, the group, indirectness, and reciprocity play a large role in communication (Chinese Cultural Connection, 1987).

To overcome some of these problems, the research has typically focused on understanding the other side, creating positive environments where people feel comfortable voicing their opinions, and training in other cultures. This requires a high level of cross cultural communication competence involving cross cultural effectiveness, interpersonal skills, social interactions, cultural empathy, personality traits, and managerial ability (Matveev and Nelson, 2004).

While these traits are necessary, by themselves they are insufficient in creating effective intercultural business communication. Managers need to go beyond understanding the other side. As business people, they have the task to get results, implement strategies and create an environment where employees can work effectively and efficiently. They are responsible for bringing together cultural strategies, communication strategies, and business strategies. And in that scenario, understanding the other side is a first step only (Varner, 2000).

To advance the field, we need a paradigm shift. I propose that effective intercultural communication requires active negotiation by both sides. As we enter the process, we need to understand our own goals and the goals of the other side. Clausen calls this "negotiated culture" (Clausen, 2007). As people from two cultures come together, they create a new culture (Clausen, 2007; Varner, 2000). In this context, we need to understand what is negotiable and what is not, and what are the underlying positions of power and authority. No culture dominates

all the time. Which cultural priorities prevail will depend on the circumstances of the situation, and the new culture will emerge in the process of negotiation.

So far, researchers have examined the impact of culture on the negotiation process in international business (Metcalf, Bird, Peterson, Shankarmahesh, & Lituchy, 2007). Clearly, culture has a huge impact on this process, but there has been almost no attention to intercultural communication as a negotiated culture. Yet, it is precisely this negotiated culture that moves the business process forward. From the research, managers understand the cultural priorities of Japanese and American managers (Hofstede, 1980). Japanese managers are more high context, collectivist, and tend to avoid uncertainty when possible (Hall, 1959; Hofstede, 1980). But how do those characteristics influence the communication patterns? For example, when American managers work in a Japanese environment with Japanese managers, they negotiate when direct communication is appropriate and when it is beneficial to be more indirect. When safety issues are of concern, both sides may agree to be direct in their communication. On the other hand, when a manager wants to communicate concerns about the level of performance, the two sides may negotiate a more indirect communication—especially if others are present—in order to save face. Both sides are actively involved in this process.

The role of negotiation of cultural positions in intercultural business communication needs to be further researched and tested. ■

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CIVIC ENGAGEMENT, INFORMATION TECHNOLOGY, & GLOBAL CONTEXTS

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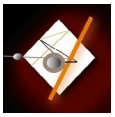
Keywords. Civic engagement, Information and communication technology for development (ICTD), Globalization, Student research.

Civic engagement is an important focus of professional communication—*Technical Communication Quarterly*, 2004 issue on civic engagement (Dubinsky & Carpenter, 2004). In academic contexts, civic engagement often occurs through local university-community partnerships (Barton & Evans, 2003; Blythe, 2004; Clark, 2004; Dubinsky, 2002; Henson & Sutliff, 1998; Huckin, 1997; Scott, 2004). However, professional work environments are increasingly globalized.

Professional communication occurs in ever-more international and intercultural contexts, and is often facilitated by information and communication technologies (ICT). Global partnerships offer real-world environments for professional communication students to



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learn complex communication skills (Harrington, 2010; Goby, 2007; Starke-Meyerring, Duin, & Palvetzian, 2007). To prepare the next generation of professional communicators for the increasingly global, interconnected workplace, academics should seek civic engagement opportunities within not only local contexts, but global as well.

Information and communication technology for development (ICTD) offers civic engagement opportunities that incorporate traditional focuses of professional communication (e.g., analyzing audiences, conveying technical information) with recent issues affecting our field, such as virtual teams, distributed work, computer-mediated communication, and cross-organizational communication. ICTD involves using ICTs such as computers and mobile phones as central components of efforts to improve the wellbeing of people in resource-constrained communities, particularly within developing nations (Brewer *et al.*, 2005). ICTD research involves disciplines such as computer science, information science, anthropology, human-computer interaction, geography, development studies, health informatics, and others. ICTD projects often involve using ICTs to communicate technical information (e.g., agricultural procedures or healthcare information) to local stakeholders.

Thus, ICTD involves challenges familiar to professional communicators—accurately identifying stakeholders' information needs, creating culturally and rhetorically effective information products, and selecting media and formats appropriate for the message, purpose, and audience—complicated by cross-cultural contexts. ICTD is a natural fit for professional communicators seeking global contexts for civic en-

gagement, but it has yet to be widely pursued by professional communication scholars. Therefore, this paper calls for professional communication scholars to contribute to multidisciplinary ICTD research and to facilitate student participation.

ICTD is a multidisciplinary, multicultural, often multilingual research area with inherently broad power disparities among stakeholders. Therefore, ICTD research abounds with complexity and controversy, particularly regarding the definition of development and the role of technology in development. In defining development, some scholars emphasize empowerment, others economic benefit (Gomez, Baron, & Fiore-Silfvast, 2012); some emphasize agency, others wellbeing (Ratan & Bailur, 2007). Debates regarding technology include open source versus commercial software (Sahraoui, 2009), customized versus standardized technologies (Gurumurthy, 2010; Ciaghi & Villafiorita, 2012), and, most importantly, technology's role in development impact (Toyama, 2011). These complexities inherent to ICTD make for rich learning environments for students, who must learn to balance conflicting, equally important viewpoints in the workplace (Davenport, 1997) and to design meaningful, appropriate messages across cultures.

But facilitating ICTD research opportunities for students can be challenging. For example, it can be difficult for faculty members to forge the range of necessary relationships with stakeholders such as intended beneficiaries, funding agencies, approval-granting bodies such as government organizations, and partner organizations such as nonprofit groups. In addition, IRB processes are incongru-

ent with generating locally envisioned, partnership-driven research (Bakardjieva, Feenber, & Goldie, 2004).

However, there are a few approaches to facilitating student research opportunities that can mitigate some of these challenges (e.g., partnering with a nonprofit organization that has already developed long-term relationships with local stakeholders and identified ICTD-relevant needs). Nonprofit organizations often welcome the affordable expertise of a technology-savvy graduate student seeking summer research, and, although paid internships with nonprofit organizations are rare, larger organizations can often offer free in-country housing and transportation. Another approach to mitigating the challenges of facilitating students in conducting ICTD research is to point students to formal internships with organizations such as Microsoft Research's Technology for Emerging Markets research group.

ICTD research offers a wealth of benefits to faculty members as well, enriching classroom teaching and facilitating cross-disciplinary publications. For example, when teaching about writing and designing for complex user groups, I describe the challenges of designing a health information system to be used by

1. a nonprofit organization in the US to raise funds for healthcare,
2. healthcare workers in rural Sub-Saharan Africa to enter data, and
3. Ministry of Health officials to inform national budget decisions (Walton & DeRenzi, 2009).

These users spoke different languages, had different short-term goals, and had different cultural communication practices, but all had to share the same information system. Describing this research in the classroom not only facilitates useful discussions, but broadens students' picture of our field.

Beyond the classroom, ICTD offers researchers a growing range of publication opportunities. Academic journals, such as *Information Technologies and International Development*, and conferences provide venues for publishing ICTD work by researchers across disciplines. In a February 8, 2010, blog entry, leading ICTD scholar Richard Heeks reported a nearly 2,000% increase in ICTD research from 1999 to 2008 (2010). ICTD publications have increased significantly in the last decade, producing 33 journal articles in 1999 and 182 journal articles in 2009 (Heeks, 2010).

Professional communication increasingly occurs in global contexts facilitated by information technology, and professional communication scholars have argued that we have an obligation to use our skills for public good through civic engagement (Bowdon, 2004). ICTD offers professional communication scholars a meaningful, important, and relevant opportunity for civic engagement in a global context. ■

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THEORIES THAT APPLY TO TECHNICAL DOCUMENTATION

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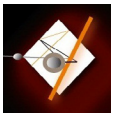
Keywords. Technical communication, Technical documentation, Software documentation, Cognitive load, Constructivism.

Written instructions govern, guide, and control user actions on a daily basis in tasks that range from operating industrial equipment, installing a wireless router, to using computer software. These instructions must be accurate and clear, because omissions or ambiguous procedures may lead to incomplete tasks or mistakes (Moore, 1996). Incomplete tasks may result in inaccurate accounting or reporting, which could have economic consequences. Furthermore, mistakes or an accumulation of mistakes might have consequences that are more serious (Moore, 1996). For example, comprehensive and accurate procedures are critical to the safe and effective operations in a nuclear plant. Errors encountered in following procedures can lead to permanent shutdown of a multimillion dollar investment as experienced at Three Mile Island in



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1979, and can result in catastrophic events as experienced at Chernobyl in 1986 (Wieringa & Farkas, 1991).

Written instructions such as emergency procedures and software documentation are a genre of technical communication. For software, documentation is a descriptive extension of the software product. The implications of poorly developed information can be catastrophic for financial reasons. For example, there is a potential liability in defective documentation because statements can become "express warranties, guarantees that the product will work as described" (Kaner, 2004, p. 194; Smith & Shirk, 1996). If the product does not perform as described in the documentation, the "vendor has breached the contract and the customer can demand compensation" (Kaner, 2004, p. 194).

Studies of the role and value of documentation have shown that high quality documentation can reduce after-sales costs, and in many cases can pay for itself (Mead, 1998). In many organizations, documentation is taking the place of some employee training, as businesses search for ways to reduce costs (Fontelera, 2009). Whether documentation is an extension of the product or is a replacement for training, documentation is a learning medium that can transform the user experience, providing useful and practical information presented in a context-sensitive format.

The expanding role of technical documentation as a learning instrument suggests that a broad application or adaptation of learning theory could be beneficial. When instruction and learning occur in the workplace, often software and the accompanying documentation are involved. Readers of documentation "read to do" (Redish, 1989, p.

289) and "read to learn" (p. 289). The goal of *reading to do* is to "extract information for immediate action" (Redish, 1989, p. 289) and the goal of *reading to learn* is to "absorb information for future recall" (p. 289). How these goals are accomplished depends on the approach used to design and develop the documentation.

As a learning medium, technical documentation must transmit, translate, and articulate the meaning of software (Scott, Longo, & Wills, 2006). The documentation writer's responsibility is to design and develop content that promotes learning rather than simply presenting information. It is not enough to transmit and translate the information from the expert to the user; rather, the writer must negotiate the flow of information from the perspective of the user and draw upon the expert's knowledge (Slack, 2003).

The enigmatic process of technical writing is an art and science that requires writing talent and the capacity to translate abstract concepts and technical jargon into usable content (Slack, 2003). Technical writing involves the design and construction of documentation that "accommodates technology to the user" (Dobrin, 2004, p. 107). Effective writing enables learning, because it is "a kind of semipermeable membrane that lets understanding leak through at a controlled rate" (p. 107).

Designing content to support this process may be frustrating and challenging for writers because most users treat documentation as a tool, reading it only when a problem arises or when an explanation is needed. The reader decides what to read and how much to read and interprets the meaning based on his or her background, experience,

and knowledge (Sun, 2006). Readers do not necessarily pick up a guide to read from front to back; reading is sporadic, which means that the design and packaging must meet their needs.

This is the enigma of technical communication—how to convey effective information that meets the user's needs, compels the user to act upon the new information, and invites the user to return to the documentation.

Theories for Technical Documentation

Technical communication is a multidimensional and multidisciplinary field; it is comprised of visual presentation, artistic and creative expression, typography, information technology, and writing (Carliner, 2001). Technical communication is crossdisciplinary because it overlaps and has synergy with instructional design, usability, and information design. Moreover, the technical communication genre of technical documentation promotes learning, just as do these other disciplines (Coe, 1996).

Effective writers bridge the gap between the expert and the end-user–non-expert; therefore, the writer must know *how* to bridge the gap, which may be very wide and murky. Furthermore, theory gives the writing approach its credibility, and it is theory that enables the writer to design and develop content that will serve the user (Hubbard, 2006).

Principles of learning that apply to the design and development of documentation include cognitive load and constructivism. Cognitive load is concerned with long-term memory, working memory, and

contextual relevance. Cognitive load is about balancing the amount of information, structuring the delivery into manageable chunks, and maintaining content relevance for the learner (Sweller & Chandler, 1994). Constructivism focuses on how the learner interacts and processes the information, because knowledge is constructed rather than acquired (Ormrod, 2008).

Design practices that support working memory and contextual meaning adopt a task-oriented style that originates from the early 1980s with the rise of cognitive psychology (Mirel, 1998). A task-oriented approach allows the user to think about how to use the software to accomplish work with a real world context. Meaningful task-oriented headings designed in the context of the workplace signal user action (Redish, 1993, 1997, 1998). For example, a software menu with labels of *Users*, *Roles*, *Privileges*, and *Skills* must be presented in the context of user tasks within the documentation. Without context, the user may not be inclined to read the documentation, because these labels do not necessarily inform. Conversely, the documentation can present these labels as *Administering User Accounts*, *Assigning Roles to User Accounts*, *Assigning Privileges to Roles*, and *Defining User Skills*. These labels are action-oriented and they inform the reader.

To further illustrate this point, a task labeled *Refreshing the System* matches the *Refresh* command of the software interface but it may not indicate any relevance to a user. It introduces more questions such as what, why, and when. However, the label *Monitoring the System* is more descriptive, and may provide a clue to a relevant activity in the workplace. *Monitoring* connotes watching over something, whereas *re-*

freshing connotes to revive or restore (Visual Thesaurus). *Monitoring* may be more descriptive and applicable than *refreshing*. The writer's challenge then is to use terms and phrases that are meaningful to the workplace, and to avoid using software labels that may be unsuitable for the user's situation. This is an example of what a constructivist approach can do for user comprehension; the design must address and represent the variables and the relationships to provide the user with a context that fits the dynamics of daily workplace practices (Mirel, 1998).

Are these principles of learning consciously applied in the design and development of software documentation? Has the research community evaluated these principles for documentation? A study by Johnson (1997) suggested that writers with a higher level of education were more likely to address user needs through task orientation, which is a key attribute of a user-centered focus that supports learning. Johnson's observations may also suggest that principles of learning could relate to instructional documentation.

There is recognition within the field of technical communication that certain attributes of theory are important. Although the mention of theory is infrequent, there seems to be little debate about the value of theory in technical communication. The mention of theory by authors is seldom explicitly discussed through the lens of the principles of learning. "Technical communication practices and curricula have always bore the marks of influential, though not always explicit, theory" (Hart-Davidson, 2001b, para. 3). Grice (2001) acknowledged, "Members at all levels of STC and of the profession at large have bemoaned

the lack of theoretical basis for what we do as professional technical communicators" (para. 2). Nonetheless, we have the works of theorists such as Karen Schriver (1997) and Janice Redish (1993) who have contributed theoretical underpinnings of technical communication in document design and cognitive processes.

Yet, there is a theory gap in the field of technical communication in which "the ranks of working professionals *and* academics in technical communication should participate in activity that makes the core expertise of technical communication explicit" (Hart-Davidson, 2001a, p. 147). Moore (1997) proposed a theory of instrumental discourse for technical communication that focuses on content directed to the workplace, places emphasis on context of the material, focuses on relating how to accomplish a task, considers how to explain complex procedures, and empowers the user by teaching how to perform a series of actions. The instrumental aims of technical communication are "governance, guidance, control, or execution of human activities" (Moore, 1997, p. 166). These aims are carried out in product documentation, reference manuals, installation instructions, laws, policies, and forms.

Mehlenbacher (2008) addressed theory in terms of cognitive learning and information spaces in his discussion about communication design. He too admitted that the instructional and communication design community conducts much research; however, researchers have focused very little on their "audiences as *learners* first and foremost, who engage in complex *learning* activities whenever they interact with information" (p. 140). There has been limited "interaction between

researchers studying communication design and researchers studying instructional design and learning theory" (p. 144).

How can learning theory be introduced to practitioners to show relevance toward the design and development of quality documentation? We need case studies of documentation sets that have been redesigned for the purpose of reducing cognitive load and enhancing learning. ■

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VIRTUAL INTERNATIONAL SERVICE LEARNING

Negotiating boundaries

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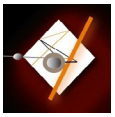
Keywords. Virtual service learning, Global partnership, Collaboration, International communication, Literature review.

In a special issue on international service learning and globally networked environments, Starke-Meyerring (2010) argues students must learn to "collaborate across multiple boundaries" to become "citizens and professionals in the globalization of their fields, work, and civic life" (p. 260). Case studies and exercises engage students in global communication, but service learning directly connects students with global partners to collaboratively solve open-ended problems.

Although on-site contact provides effective service-learning experiences, a review of literature about *virtual* service learning and global partnerships documents the value of virtual collaboration, acknowledges the complexities of tasks, time, translation, and technology—the "pragmatic details" (Craig, Poe, & Rojas, 2010, p. 284)—and



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suggests strategies for negotiating boundaries among its US and Canadian (Starke-Meyerring & Andrews, 2006), Mexican (Craig *et al.*, 2010), Irish (Flammia, 2011), Russian (Stevens, 2001; Herrington, 2010), Cuban (Sapp, 2004), European (Mousten, Maylath, Vandepitte, & Humbley, 2010), and open source (Ding 2007) community partners.

Virtual collaborations include an array of tasks and deliverables, each negotiated and adapted to its international context: correspondence, résumés, proposals, oral presentations, process or product documentation, white papers, websites, publicity materials, and usability testing. For example, in an open documentation project, students research, write, test the usability of the documentation, and create international marketing materials for open source software. Ding (2007) observes the "Open Source community [becomes] not only the client . . . but the provider of information and feedback" (p. 3).

Coordinating with community partners across time and cultures adds layers of complexity. Authors report finding a "window of opportunity" for online collaboration requires students manage multiple time zones and conflicting holiday schedules (Mousten *et al.*, 2010). To ensure successful collaboration, Herrington (2010) recommends daily communication, regardless of time zones. She notes that adopting a strict communication schedule reduces team and production problems for US and Russian partners, thus documenting that international communication cannot be taught but only learned in context, through experience, after students "struggle with it in application" (p. 522).

Authors also report translation issues, especially for monolingual US teams; however, Starke-Meyerring (2010) observes that trans-

lation challenges teams to examine their assumptions about traditional linguistic norms. Some authors include modern language or TESL programs as project partners (Craig *et al.*, 2010) or ensure that teams include members who can translate materials (Starke-Meyerring & Andrews, 2006). Mousten *et al.* (2010) discuss "text travel"—texts moving from the original language to translated text (p. 403)—and argue that instructors must prepare students to address translation issues, for example, loan words, negation, hedges, registers, and formal/informal discourse.

Virtual partnerships rely on technology to facilitate collaboration and document production, but authors also acknowledge the challenges. For Starke-Meyerring and Andrews (2006), technology facilitates "water-cooler conversations" and repairs "faultlines" within teams (p. 36). They observe that, when a team's name signals a "shared team culture," their name predicts the team's eventual success (p. 36). Global partners use email, wikis, collaboration software, Google Docs, and video conferencing for research and production; some use Skype, blogs, forums, texting, and one uses creative commons to publish open source documentation. Not all team projects, however, have easy access to technology. Sapp (2004) reports scarce print resources, outdated software/hardware, limited Internet and computer access, and geopolitical constraints create significant challenges in collaborations with Cuban partners.

Virtual service learning challenges our perceptions about tasks, time, translation, and technology; nonetheless, social change, the expansion of communication technologies, and a global economy make

virtual international partnerships inevitable. Current trends suggest virtual partnerships will rapidly increase the demand on students and professionals to use social media to network and collaboratively create, share, and manage content. Focusing on "positive societal change" (Flammia, 2011, p. 3) through virtual service-learning partnerships will develop students' abilities to solve problems, negotiate constraints, and productively engage in global partnerships. ■

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PROFESSIONAL WRITING AND VIDEO GAMES

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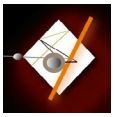
The international economic, cultural, and educational significance of video gaming is hard to overlook. In 2009, worldwide revenue for the video game industry exceeded US$60 billion, and is expected to reach US$112 billion by 2015. This is not just recreational gaming; the Entertainment Software Association reports that "70 percent of major employers utilize interactive software and games to train employees" (2012, p. 2). But why should this interest those who practice, research, and teach professional communication?

First, video games show much potential as "pedagogical tool[s] for professional writing courses and professional writing training" (Sherlock, 2009; see Coppola, 2003, and Jennings, 2002, for discussions of individual game-based courses). Scholars such as Gee (2003) and Squire (2006) have argued that video games are ideal environments for learning, and the social nature of many contemporary video



games encourages communication and collaborative problem-solving that extend beyond the game itself to include the many public forums where gamers gather to deliberate and strategize. Sherlock (2009) argues that "grouping" by players into collaborative teams to solve problems and reach goals encourages gamers to reflect upon the ideal "division of labor" that will allow their group to "work more efficiently and effectively toward their outcomes" through "explicit and implicit evaluations" about past interactions (p. 271). Effectively managing such a group—often composed of players distributed across the globe communicating through instant messaging and voice-over internet protocols—requires strategic thinking, technical knowledge, and timely communication.

Second, although they are highly visual media, video games enable numerous text-based interactions (Schmid, 2008) and are rich sites for facilitating meaningful communication (Bronack, Cheney, Riedl, & Tashner, 2008). Unlike static print texts, gaming spaces are "procedural" environments that allow for user-initiated "transformations and reconfigurations" within an "orderly system of causes and effects" (Kaplan, 2001, n.p.).

Such environments encourage players to become what Daniel Anderson (2003) called "prosumers"—individuals engaged in "productive consumption" of new media texts. For instance, many games allow users to create "mods"—modifications—to the gaming environment, and players of the online video game *World of Warcraft* have produced the second largest wiki, after Wikipedia, with over a quarter-million articles sharing their collective wisdom. Such user-created supple-

ments suggest how participation in video game communities can lead to engagement with complex literate practices (Mason, forthcoming).

Professional communicators and scholars can look to conversations within the field of gaming studies to understand contemporary changes in communication practices, interface design, and technical genres; what job opportunities lie in the gaming industry for professional communicators; and what skill sets these positions require. While venues such as *Game Studies: The International Journal of Computer Game Research* publish scholarship relevant to professional communication, books on video games can also enhance one's understanding of professional ethics (Consalvo, 2007), collaboration (Schroeder and Axelsson, 2006), and design (Zemliansky and Wilcox, 2010). Consalvo (2007), for instance, looked closely at how, given the "torrent of information" available online about how to play video games, gamers construct the line between a gamer being "informed" and a gamer being a "cheater" (p. 8). Such situations provide opportunities for professional communicators to reconsider, for instance, the ethical consequences of providing comprehensive content to users. For those interested in issues of human rights and social justice, the "serious gaming" movement even promises games that draw attention to social issues and solve public problems (McGonigal, 2011).

The clearest articulation of the potential for gaming as both a site for the employment of working professionals, and as a site for research and theory-building by communication scholars, however, is Eyman's 2008 article. In this article—one of several related articles in the 2008 special issue of *Technical Communication* devoted to 3D

virtual worlds—Eyman examined games as complex ecologies that enculturate players into professional discourse on topics such as interface design, systems management, and legal/ethical regulation. Enculturation into these topics can occur when, for instance, a gamer's frustration with an existing interface leads the gamer to research and install mods created by other gamers designed to add functionality to the interface. Or it can happen when a player, wanting to take advantage of the ability to design and sell digital content for a game, begins to study the intellectual property documentation published by the game developer. This ability to engage gaming as producer and not just consumer—to reconfigure and transform the gaming experience for oneself and for others—is key to gamers' enculturation into professional communicative practices.

Professional communicators, with their broad knowledge of textual and human systems, have the appropriate expertise needed, Eyman (2008) claimed, to "write themselves into the gaming industry" (p. 246). Video games and the communities they support thus provide substantial opportunities for researchers, consultants, educators, and writers alike. ■

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